

Access DB# 66913**SEARCH REQUEST FORM**

Scientific and Technical Information Center

Requester's Full Name: Callie Shusho Examiner #: 75636 Date: 5/17/02
Art Unit: 714 Phone Number 303-0208 Serial Number: 091809572
Mail Box and Bldg/Room Location: C83-5051 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Coloring Composition, Ink-Jet Ink, and Ink-Jet
Recording method

Inventors (please provide full names):

Yuki mizukawa and Keizo KimuraEarliest Priority Filing Date: 3/27/00

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Can you please find the oil soluble dye of
claims 1 + 2 where claim 2 gives specific
examples of "A" found in formula (I) of
claim 1?

STAFF USE ONLYSearcher: ELP

Searcher Phone #: _____

Searcher Location: _____

Date Searcher Picked Up: _____

Date Completed: 5-21-02Searcher Prep & Review Time: 10

Clerical Prep Time: _____

Online Time: 60**Type of Search**

NA Sequence (#) _____

AA Sequence (#) _____

Structure (#) (3)Bibliographic (and)

Litigation _____

Fulltext _____

Patent Family _____

Other _____

Vendors and cost where applicable

STN

\$161.61

Dialog _____

Questel/Orbit _____

Dr. Link _____

Lexis/Nexis _____

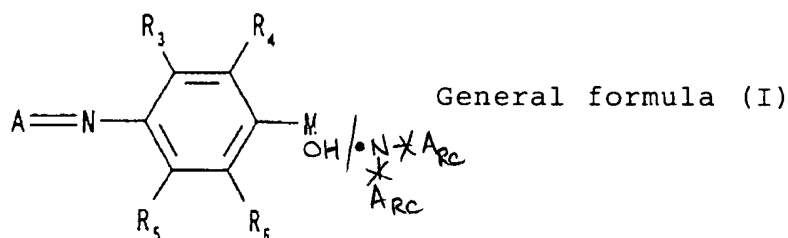
Sequence Systems _____

WWW/Internet _____

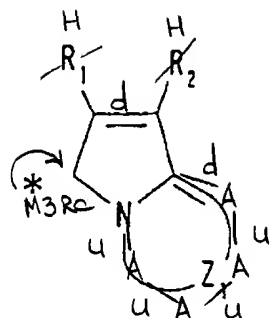
Other (specify) _____

WHAT IS CLAIMED IS:

1. An ink-jet ink comprising a coloring composition including an oil-soluble dye represented by following general formula (I):



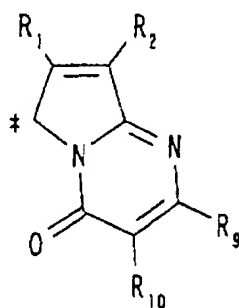
wherein A represents a group represented by general formula (II), R_3 - R_6 each independently represents a hydrogen atom or a substituent, M represents $-OY$ or $-N(R_7)(R_8)$, Y represents a hydrogen atom or a cation necessary for neutralizing charge of an oxygen ion, R_7 and R_8 each independently represents one of an alkyl group, aryl group, heterocyclic group, acyl group, alkylsulfonyl group, and arylsulfonyl group, R_7 and R_8 may be bonded to each other to form a ring, any of a pair R_4 and R_7 and a pair R_6 and R_8 may be bonded to each other to form a ring, any of a pair R_3 and R_4 and a pair R_5 and R_6 may be bonded to each other to form a ring, and general formula (II) is as follows:



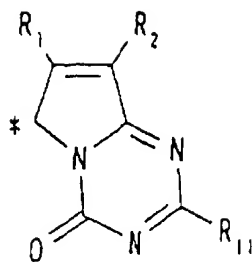
General formula (II)

wherein R_1 represents a hydrogen atom or a substituent, R_2 represents a substituent, Z_1 represents a group of non-metal atoms necessary for forming a 6-membered nitrogen-containing heterocycle, and * represents a bonding position.

2. An ink-jet ink according to claim 1, wherein A in general formula (I) is a group represented by one of following general formula (III) and general formula (IV):



General formula (III)



General formula (IV)

wherein R₁ represents a hydrogen atom or a substituent, R₂ represents a substituent, R₉, R₁₀ and R₁₁ each independently represents a hydrogen atom or a substituent, and * represents a bonding position.

3. An ink-jet ink according to claim 1, wherein the oil-soluble dye represented by general formula (I) is dispersed in a water-based medium.

4. An ink-jet ink according to claim 3, wherein the oil-soluble dye represented by general formula (I) is dissolved in a high boiling point organic solvent having a boiling point of at least 150 °C and a dielectric constant of 3 to 12 before being dispersed in the water-based medium.

5. An ink-jet ink according to claim 3, wherein coloring particulates, which contain the oil-soluble dye represented by general formula (I) and an oil-soluble polymer, are dispersed in the water-based medium.

=> file reg
FILE 'REGISTRY' ENTERED AT 17:25:35 ON 21 MAY 2002
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STRUCTURE FILE UPDATES: 20 MAY 2002 HIGHEST RN 419531-51-4
DICTIONARY FILE UPDATES: 20 MAY 2002 HIGHEST RN 419531-51-4

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d his

(FILE 'HOME' ENTERED AT 16:47:09 ON 21 MAY 2002)

FILE 'LREGISTRY' ENTERED AT 16:47:19 ON 21 MAY 2002

L1 STR
L2 STR

FILE 'REGISTRY' ENTERED AT 16:57:03 ON 21 MAY 2002

L3 0 S L1 AND L2

FILE 'LREGISTRY' ENTERED AT 16:57:19 ON 21 MAY 2002

FILE 'REGISTRY' ENTERED AT 16:59:41 ON 21 MAY 2002

L4 SCR 1874 AND 1859
L5 0 S L1 AND L2 AND L4
L6 SCR 1840
L7 0 S L1 AND L2 AND L4 AND L6
L8 SCR 1120
L9 SCR 1121 OR 1832
L10 3 S L1 AND L2 AND L4 AND L6 AND L8 AND L9
L11 77 S L1 AND L2 AND L4 AND L6 AND L8 AND L9 FUL
SAV L11 SHO572/A

FILE 'HCAPLUS' ENTERED AT 17:09:23 ON 21 MAY 2002

L12 14 S L11
L13 14556 S INKJET? OR THINKJET? OR (INK? OR PRINT? OR THINK?) (2A) (
L14 62362 S INK?
L15 4 S L12 AND L13
L16 4 S L12 AND L14
L17 4 S L15 OR L16

FILE 'REGISTRY' ENTERED AT 17:25:35 ON 21 MAY 2002

The chemical structure shows a central benzene ring with a diazo group ($\text{A}=\text{N}_8$) at position 1. The ring carbons are labeled @1 through @6. A side chain is attached at position 4, consisting of a carbon atom (G1) bonded to a nitrogen atom (N13), which is further bonded to an atom A15. The nitrogen atom N13 is also bonded to another atom A14. The side chain is shown with a dashed bond to the ring carbon and a solid bond to the nitrogen atom.

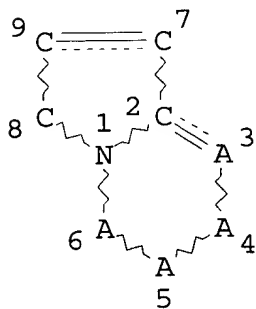
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VAR G1=OH/13
VPA 7-2/3/5/6/1 U
NODE ATTRIBUTES:
NSPEC      IS RC      AT      8
NSPEC      IS RC      AT     14
NSPEC      IS RC      AT     15
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

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GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

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STEREO ATTRIBUTES: NONE
L2                      STR
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NODE ATTRIBUTES:
CONNECT IS M3   RC AT      8
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

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GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE

L4 SCR 1874 AND 1859

L6 SCR 1840

L8 SCR 1120

L9 SCR 1121 OR 1832

L11 77 SEA FILE=REGISTRY SSS FUL L1 AND L2 AND L4 AND L6 AND L8
AND L9

100.0% PROCESSED 78082 ITERATIONS
SEARCH TIME: 00.00.05

77 ANSWERS

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 17:25:52 ON 21 MAY 2002

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FILE COVERS 1907 - 21 May 2002 VOL 136 ISS 21
FILE LAST UPDATED: 20 May 2002 (20020520/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d l17 1-4 ibib abs hitstr hitind

L17 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:718128 HCAPLUS

DOCUMENT NUMBER: 135:274350

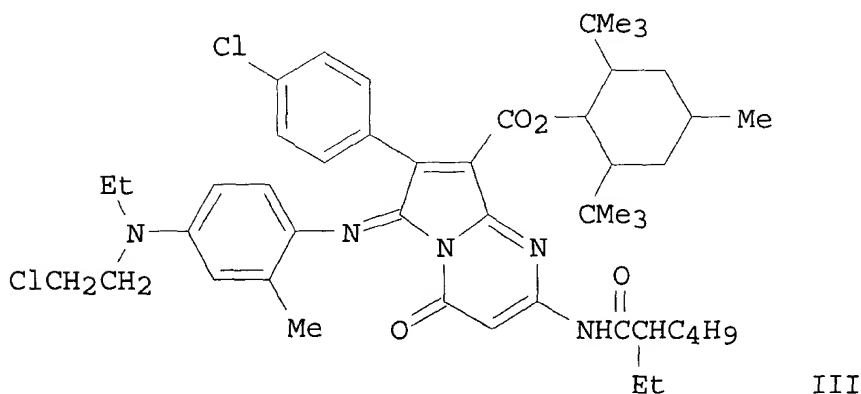
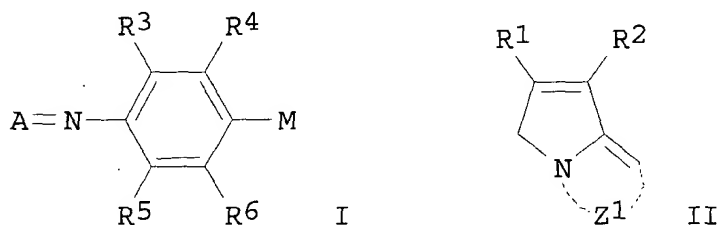
TITLE: Colored compositions containing oil-soluble
dyes, **ink-jet inks**
, and **ink-jet** recording

INVENTOR(S): Mizukawa, Hiroki; Kimura, Keizo

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 56 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001271002	A2	20011002	JP 2000-87538	20000327
US 2002017217	A1	20020214	US 2001-800572	20010308
PRIORITY APPLN. INFO.:			JP 2000-87538	A 20000327
OTHER SOURCE(S):			MARPAT 135:274350	

GI



AB The compns. contain oil-sol. dyes I [A = II (R¹ = H, substituent; R² = substituent; Z¹ = nonmetals for N-contg. six-membered heterocycle); R³-R⁶ = H, substituent; M = OY, NR⁷R⁸ (Y = H, cation species; R⁷, R⁸ = alkyl, aryl, heterocycle, acyl, alkylsulfonyl, arylsulfonyl; R⁷R⁸ may form ring); R⁴R⁷ and/or R⁶R⁸ may form ring;

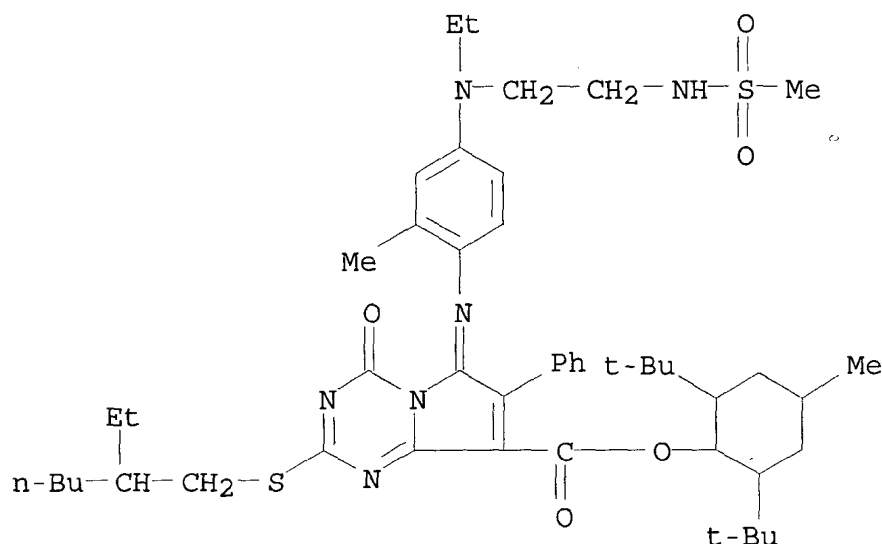
R3R4 and/or R5R6 may form ring]. Thus, a colored fine particle dispersion contg. sec-Bu acrylate-acrylic acid copolymer Na salt and an oil-sol. dye III, diethylene glycol, glycerin, triethylene glycol monobutyl ether, Na sulfohexaethylene glycol monododecyl ether, Na di(2-ethylhexyl) sulfosuccinate, and H2O were mixed to give an **ink** showing good color tone and water and light resistance.

IT 309934-07-4P 347368-38-1P

(colored compns. contg. oil-sol. dyes, **ink-jet inks**, and **ink-jet** recording)

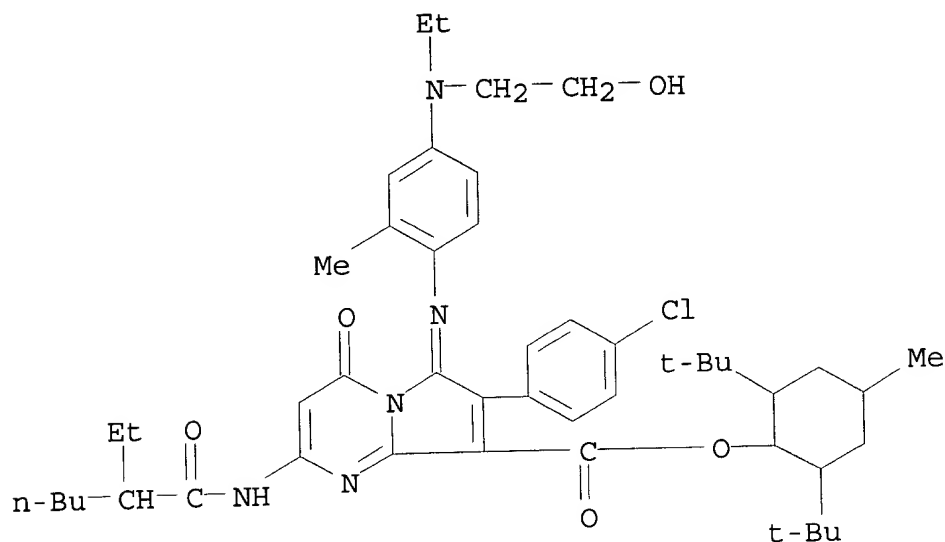
RN 309934-07-4 HCAPLUS

CN Pyrrolo[1,2-a]-1,3,5-triazine-8-carboxylic acid, 2-[(2-ethylhexyl)thio]-6-[[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]amino]-2-methylphenyl]imino]-4,6-dihydro-4-oxo-7-phenyl-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)



RN 347368-38-1 HCAPLUS

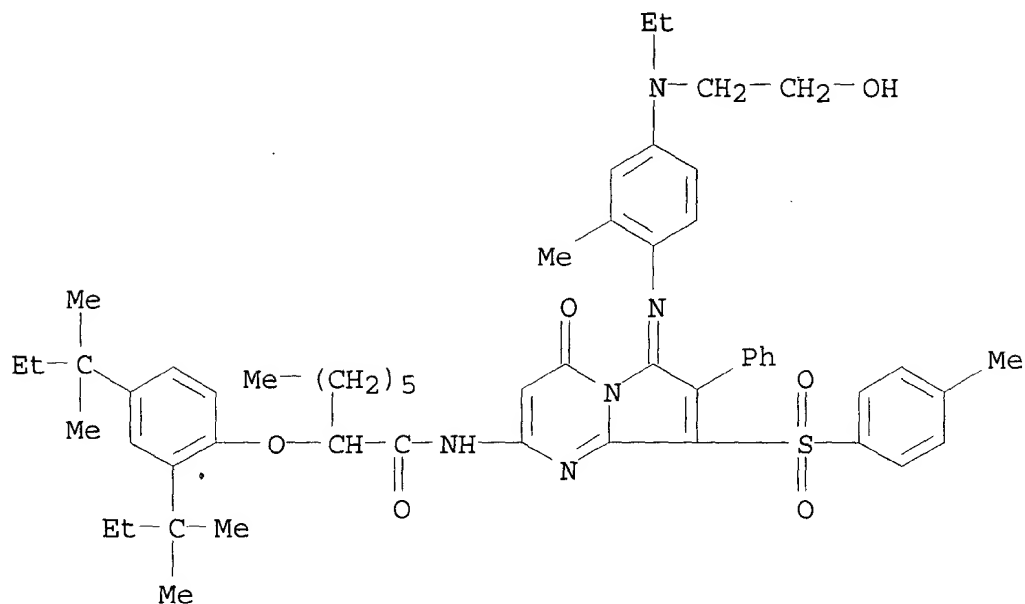
CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 7-(4-chlorophenyl)-6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-2-[(2-ethyl-1-oxohexyl)amino]-4,6-dihydro-4-oxo-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)



IT 347368-40-5 347368-58-5 347368-64-3
 347368-68-7 347368-70-1 363159-05-1
 363159-06-2 363159-07-3 363159-08-4
 363159-09-5 363159-10-8 363159-11-9
 363159-12-0 363159-13-1 363159-14-2
 363159-15-3 363159-16-4 363159-17-5
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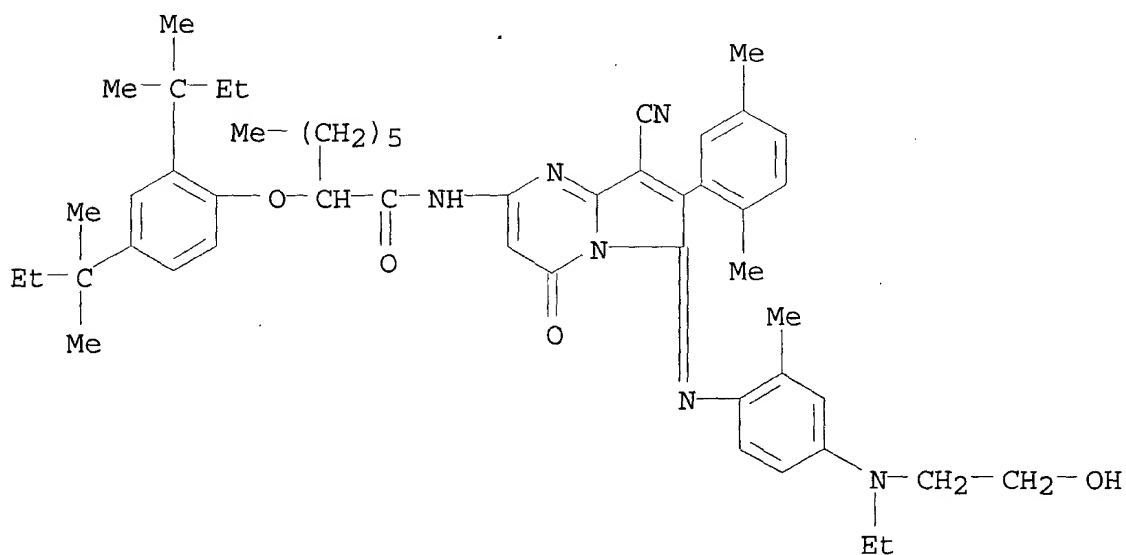
(colored compns. contg. oil-sol. dyes, **ink-jet**
inks, and **ink-jet** recording)

RN 347368-40-5 HCAPLUS
 CN Octanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-4,6-dihydro-8-[(4-methylphenyl)sulfonyl]-4-oxo-7-phenylpyrrolo[1,2-a]pyrimidin-2-yl]]-(9CI) (CA INDEX NAME)



RN 347368-58-5 HCAPLUS

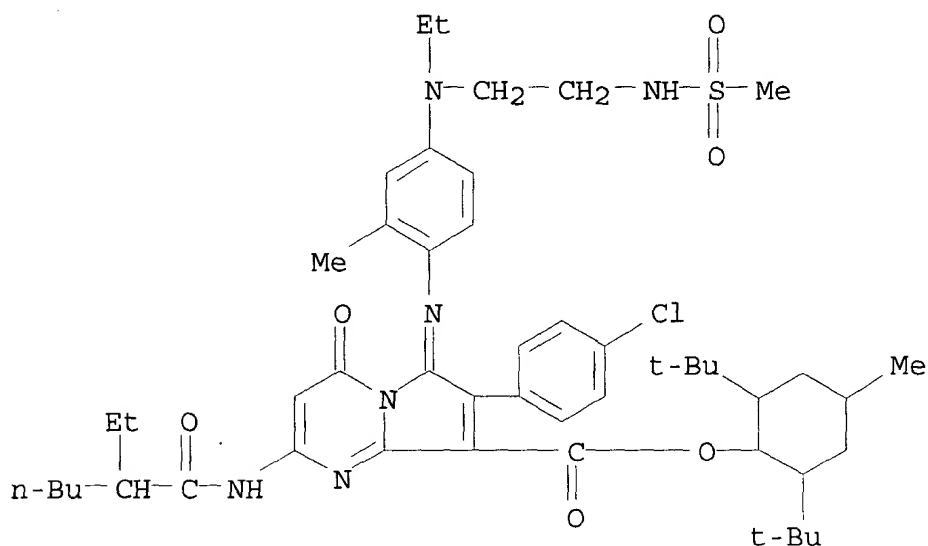
CN Octanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[8-cyano-7-(2,5-dimethylphenyl)-6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-4,6-dihydro-4-oxopyrrolo[1,2-a]pyrimidin-2-yl]-(9CI) (CA INDEX NAME)



RN 347368-64-3 HCAPLUS

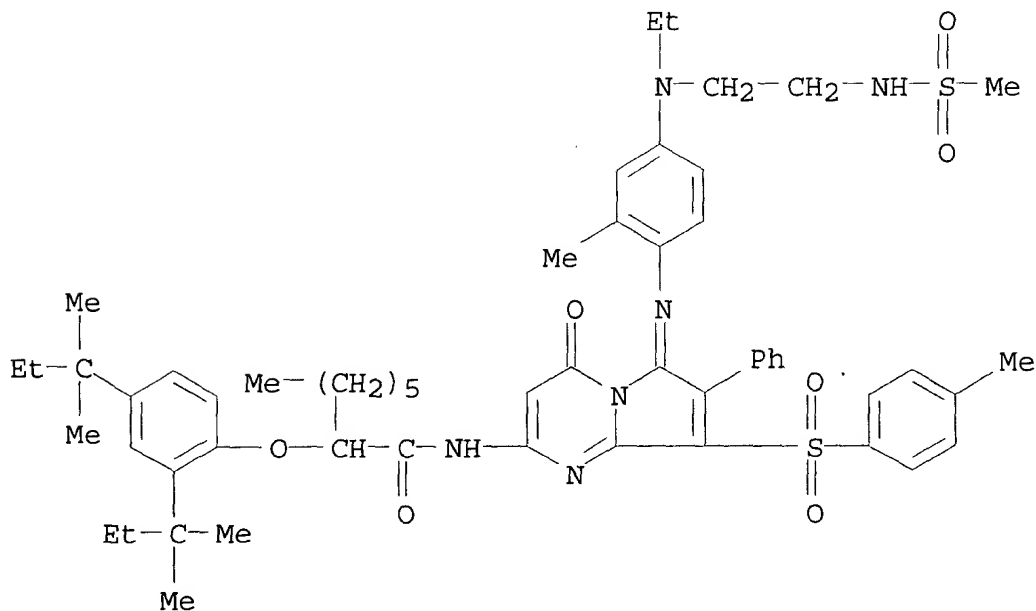
CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 7-(4-chlorophenyl)-6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-4,6-dihydro-4-oxo-

[ethyl[2-[(methylsulfonyl)amino]ethyl]amino]-2-methylphenyl]imino]-2-[(2-ethyl-1-oxohexyl)amino]-4,6-dihydro-4-oxo-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)



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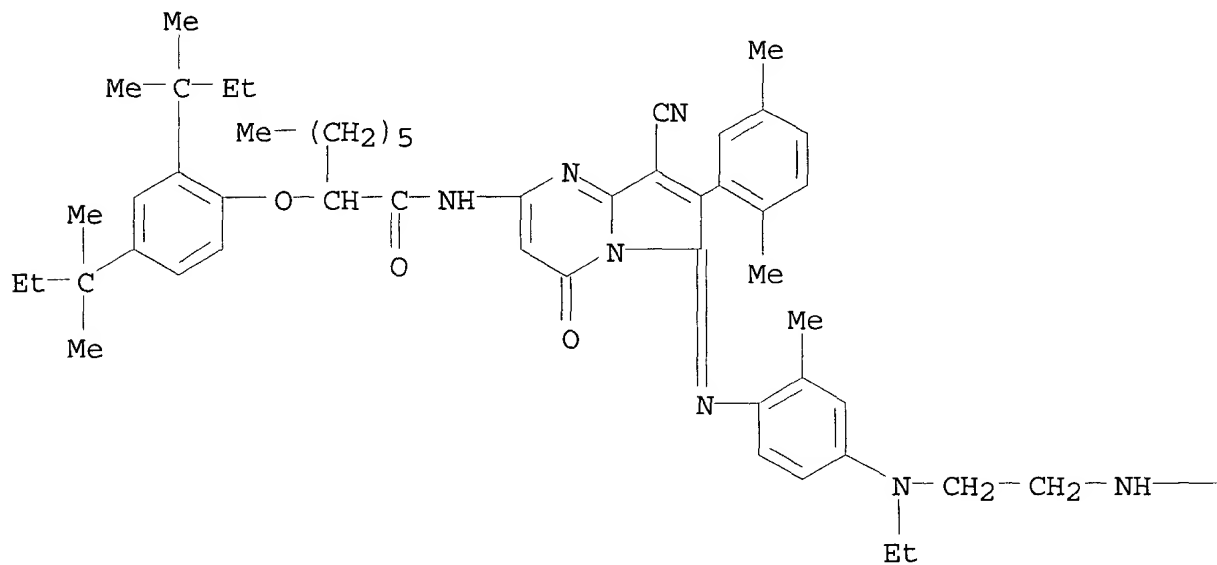
CN Octanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[6-[[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]amino]-2-methylphenyl]imino]-4,6-dihydro-8-[(4-methylphenyl)sulfonyl]-4-oxo-7-phenylpyrrolo[1,2-a]pyrimidin-2-yl]]- (9CI) (CA INDEX NAME)



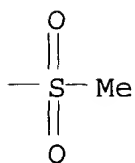
RN 347368-70-1 HCAPLUS

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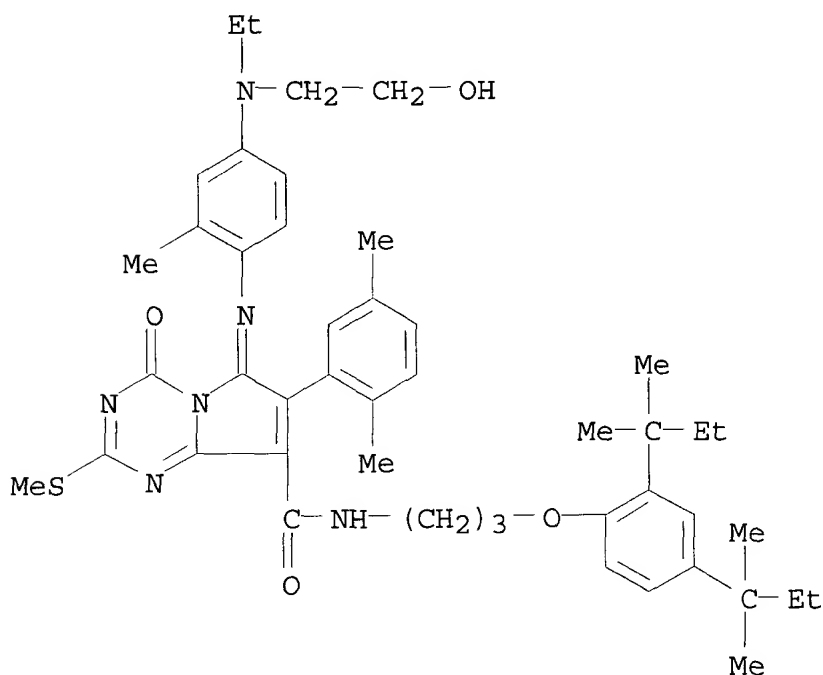


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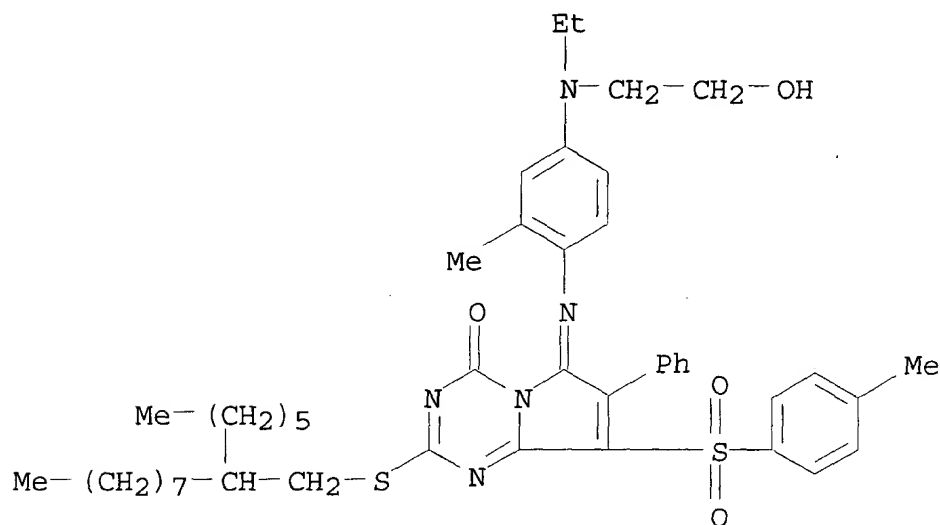
RN 363159-05-1 HCAPLUS

CN Pyrrolo[1,2-a]-1,3,5-triazine-8-carboxamide, N-[3-[2,4-bis(1,1-dimethylpropyl)phenoxy]propyl]-7-(2,5-dimethylphenyl)-6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-4,6-dihydro-2-(methylthio)-4-oxo- (9CI) (CA INDEX NAME)



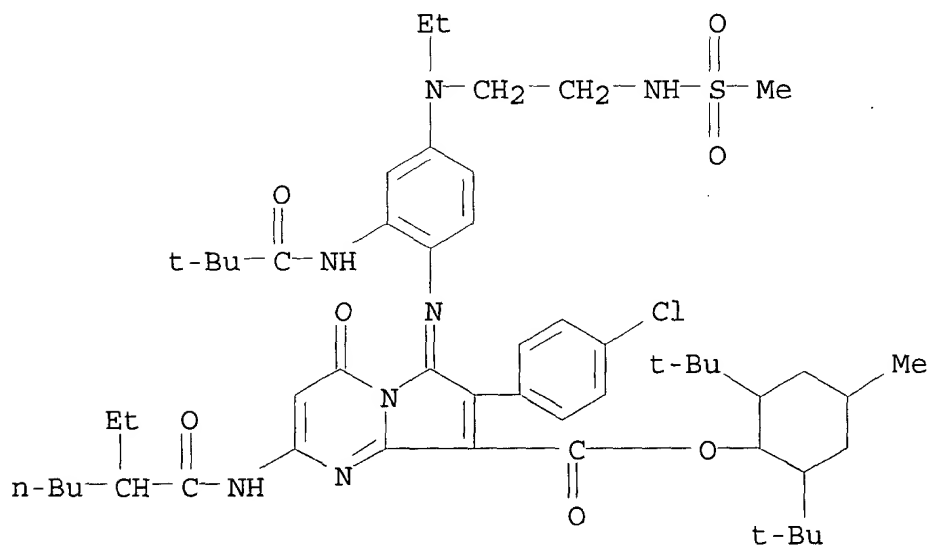
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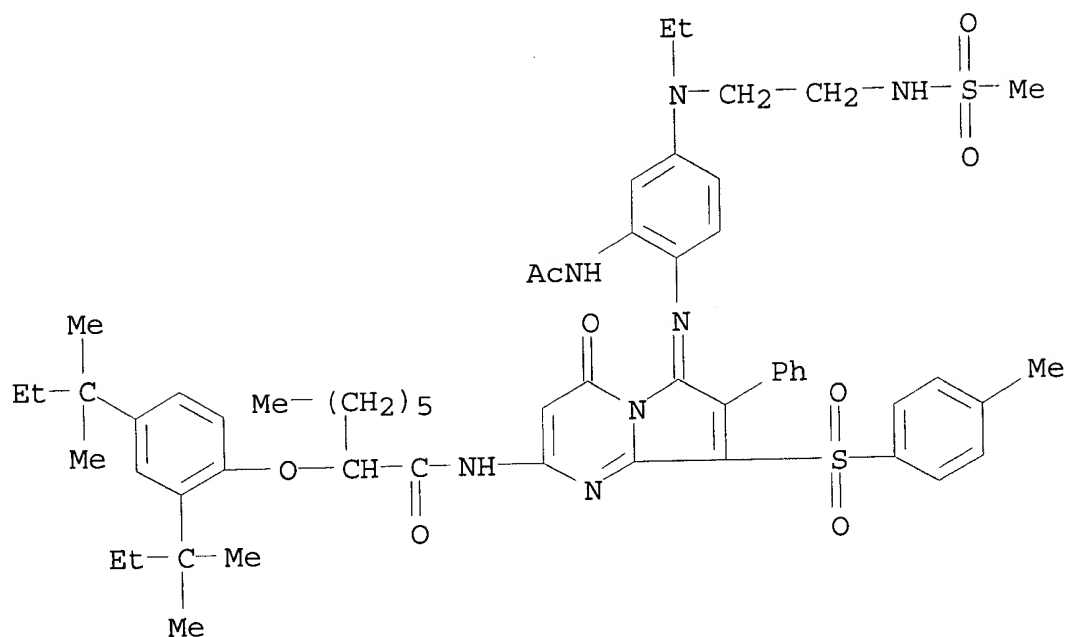
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CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 7-(4-chlorophenyl)-6-[[2-[(2,2-dimethyl-1-oxopropyl)amino]-4-[ethyl 2-[(methylsulfonyl)amino]ethyl]amino]phenyl]imino]-2-[(2-ethyl-1-oxohexyl)amino]-4,6-dihydro-4-oxo-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)



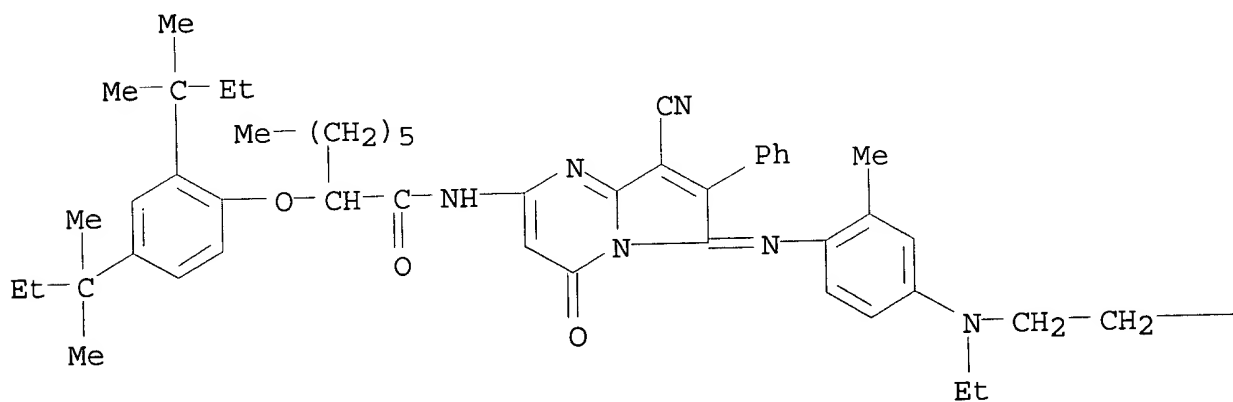
RN 363159-08-4 HCAPLUS

CN Octanamide, N-[6-[[2-(acetamino)-4-[ethyl 2-[(methylsulfonyl)amino]ethyl]amino]phenyl]imino]-4,6-dihydro-8-[(4-methylphenyl)sulfonyl]-4-oxo-7-phenylpyrrolo[1,2-a]pyrimidin-2-yl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

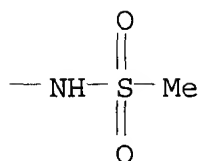


RN 363159-09-5 HCAPLUS
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 [ethyl[2-[(methylsulfonyl)amino]ethyl]amino]-2-methylphenyl]imino]-
 4,6-dihydro-4-oxo-7-phenylpyrrolo[1,2-a]pyrimidin-2-yl]- (9CI) (CA
 INDEX NAME)

PAGE 1-A

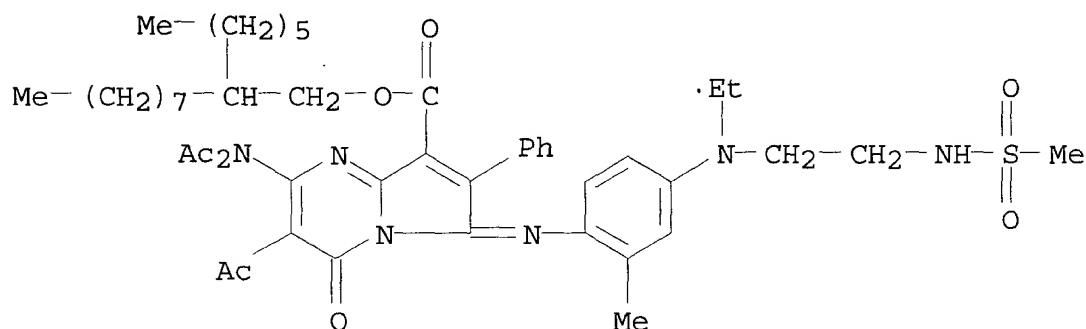


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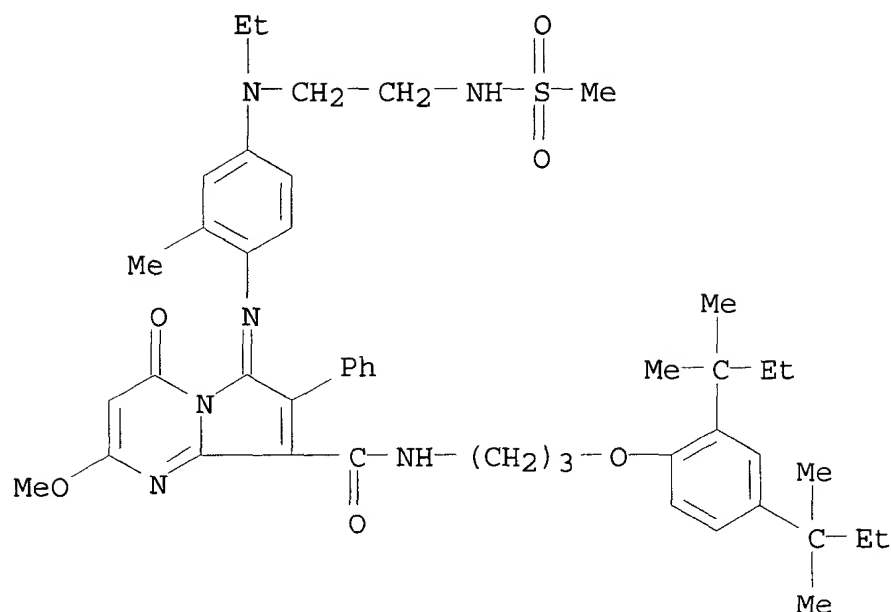
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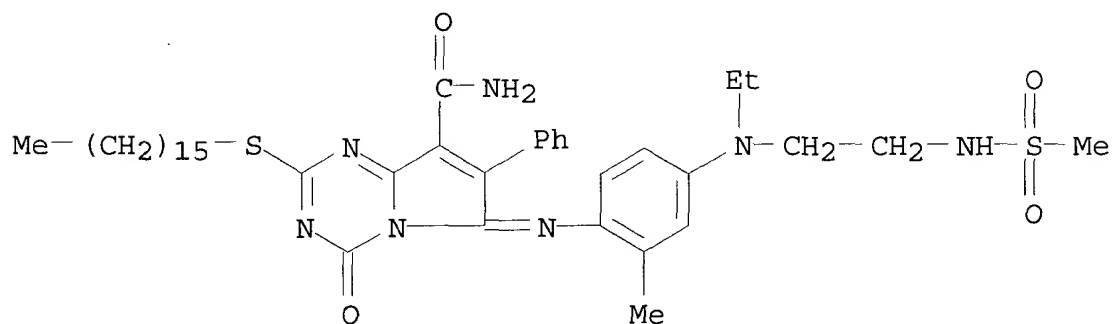
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CN Pyrrolo[1,2-a]pyrimidine-8-carboxamide, N-[3-[2,4-bis(1,1-dimethylpropyl)phenoxy]propyl]-6-[[4-[ethyl 2-[(methylsulfonyl)amino]ethyl]amino]-2-methylphenyl]imino]-4,6-dihydro-2-methoxy-4-oxo-7-phenyl- (9CI) (CA INDEX NAME)



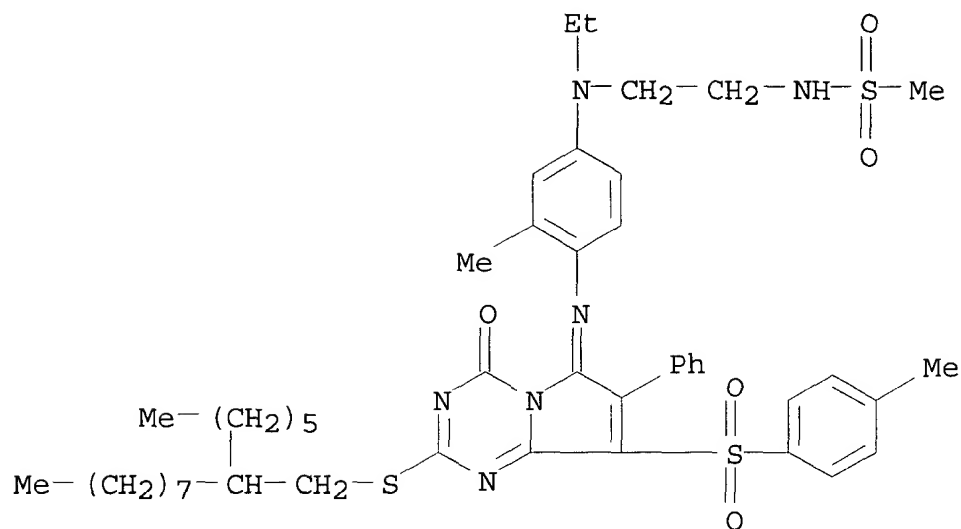
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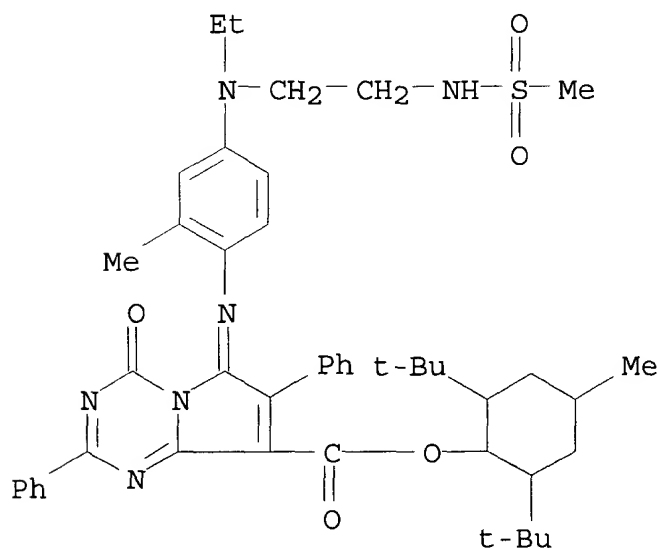
RN 363159-13-1 HCAPLUS

CN Methanesulfonamide, N-[2-[ethyl[4-[[2-[(2-hexyldecyl)thio]-8-[(4-methylphenyl)sulfonyl]-4-oxo-7-phenylpyrrolo[1,2-a]-1,3,5-triazin-6(4H)-ylidene]amino]-3-methylphenyl]amino]ethyl]- (9CI) (CA INDEX NAME)



RN 363159-14-2 HCAPLUS

CN Pyrrolo[1,2-a]-1,3,5-triazine-8-carboxylic acid,
6-[[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]amino]-2-
methylphenyl]imino]-4,6-dihydro-4-oxo-2,7-diphenyl-,
2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX
NAME)

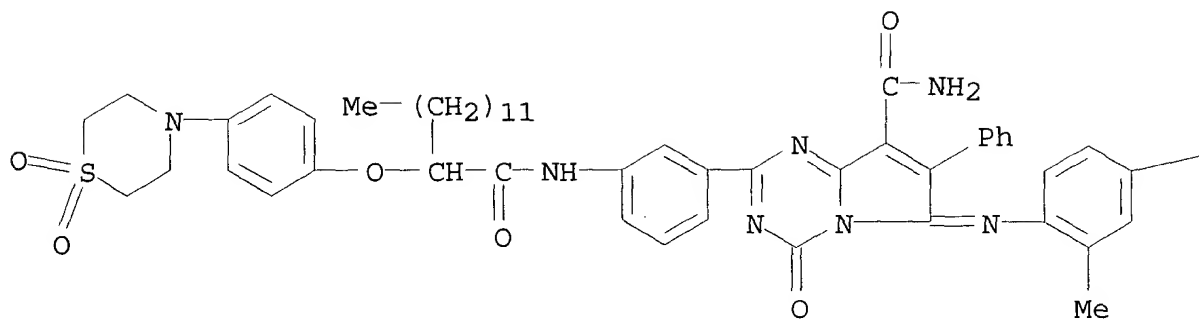


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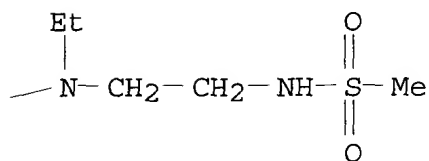
CN Pyrrolo[1,2-a]-1,3,5-triazine-8-carboxamide, 2-[3-[[2-[4-(1,1-
dioxido-4-thiomorpholinyl)phenoxy]-1-oxotetradecyl]amino]phenyl]-6-
[[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]amino]-2-
methylphenyl]imino]-4,6-dihydro-4-oxo-7-phenyl- (9CI) (CA INDEX
NAME)

NAME)

PAGE 1-A

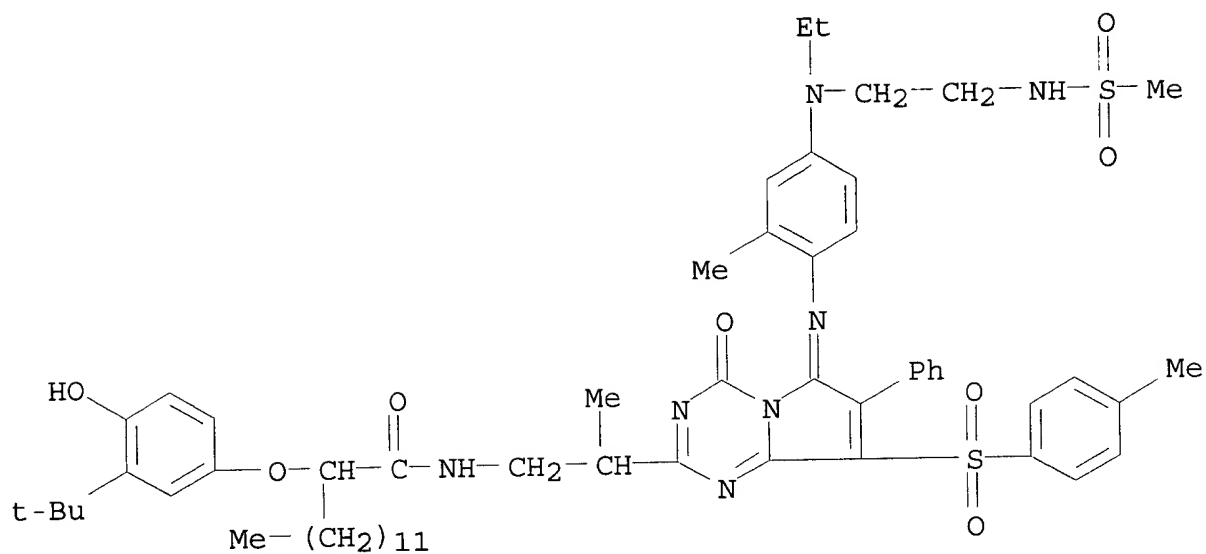


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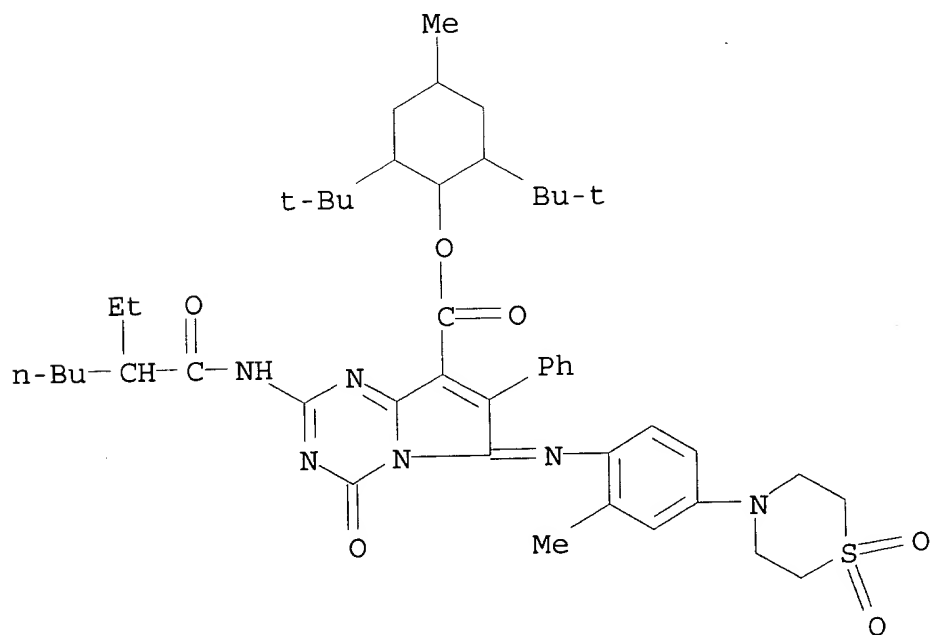


RN 363159-16-4 HCAPLUS

CN Tetradecanamide, 2-[3-(1,1-dimethylethyl)-4-hydroxyphenoxy]-N-[2-[6-
 [[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]amino]-2-
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 phenylpyrrolo[1,2-a]-1,3,5-triazin-2-yl]propyl]- (9CI) (CA INDEX
 NAME)

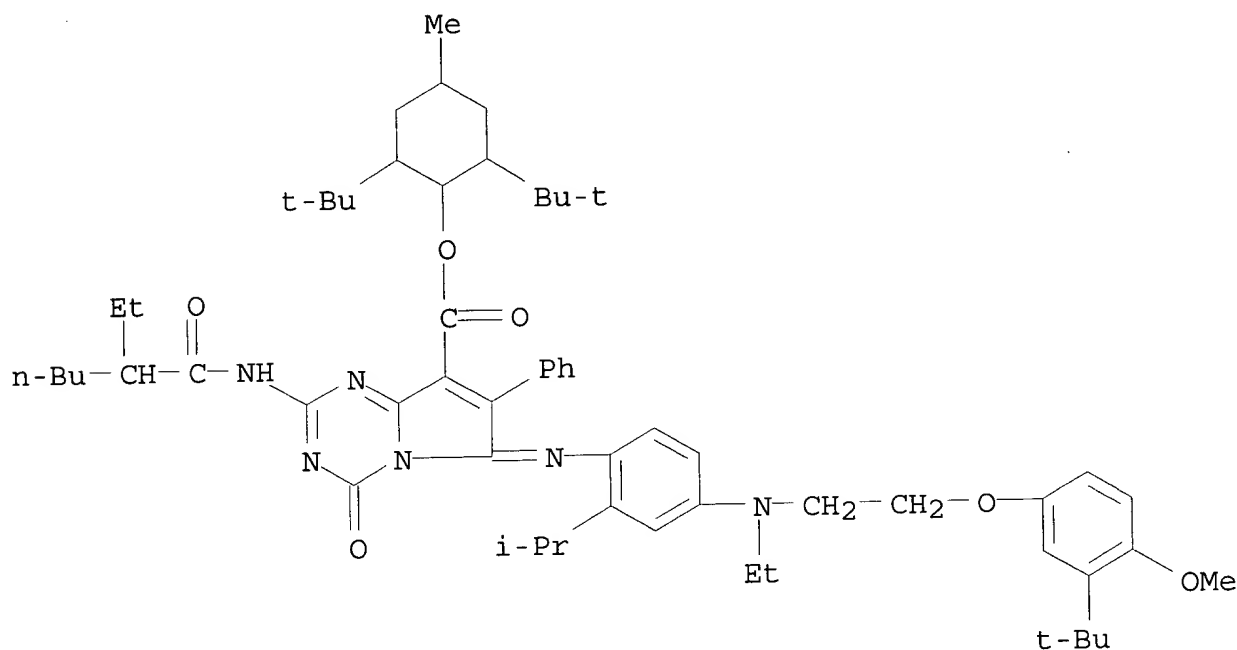


RN 363159-17-5 HCAPLUS
 CN Pyrrolo[1,2-a]-1,3,5-triazine-8-carboxylic acid,
 6-[[4-(1,1-dioxido-4-thiomorpholinyl)-2-methylphenyl]imino]-2-[(2-ethyl-1-oxohexyl)amino]-4,6-dihydro-4-oxo-7-phenyl-,
 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX
 NAME)

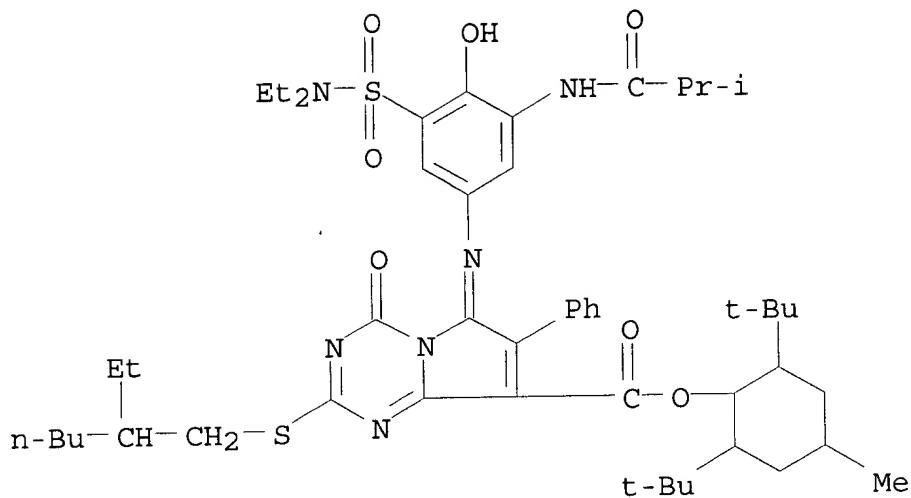


RN 363159-18-6 HCAPLUS
 CN Pyrrolo[1,2-a]-1,3,5-triazine-8-carboxylic acid,

6-[[4-[[2-[3-(1,1-dimethylethyl)-4-methoxyphenoxy]ethyl]ethylamino]-2-(1-methylethyl)phenyl]imino]-2-[(2-ethyl-1-oxohexyl)amino]-4,6-dihydro-4-oxo-7-phenyl-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)



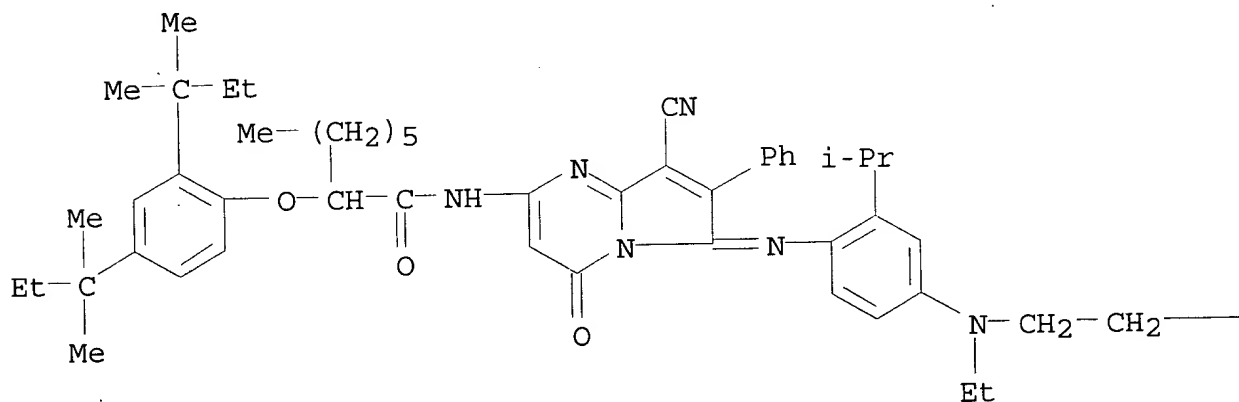
RN 363159-20-0 HCAPLUS
 CN Pyrrolo[1,2-a]-1,3,5-triazine-8-carboxylic acid,
 6-[[3-[(diethylamino)sulfonyl]-4-hydroxy-5-[(2-methyl-1-oxopropyl)amino]phenyl]imino]-2-[(2-ethylhexyl)thio]-4,6-dihydro-4-oxo-7-phenyl-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester, monosodium salt (9CI) (CA INDEX NAME)



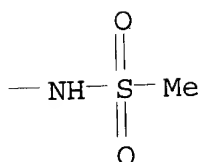
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RN 363159-21-1 HCAPLUS
 CN Octanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[8-cyano-6-[[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]amino]-2-(1-methylethyl)phenyl]imino]-4,6-dihydro-4-oxo-7-phenylpyrrolo[1,2-a]pyrimidin-2-yl]]- (9CI) (CA INDEX NAME)

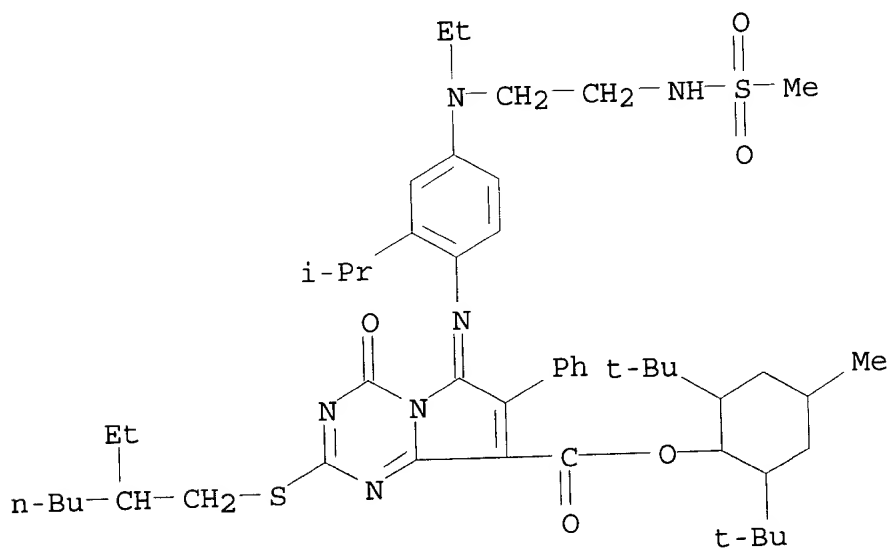
PAGE 1-A



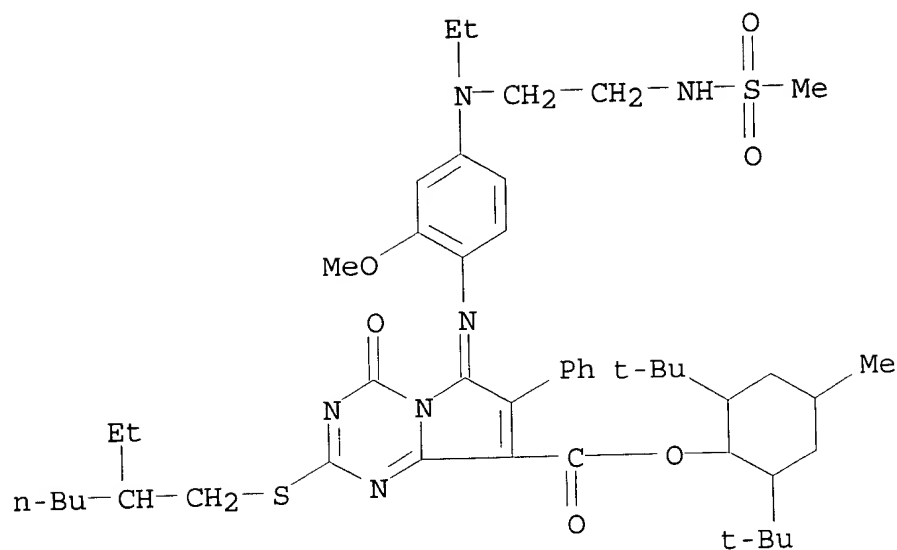
PAGE 1-B



RN 363159-22-2 HCAPLUS
 CN Pyrrolo[1,2-a]-1,3,5-triazine-8-carboxylic acid,
 2-[(2-ethylhexyl)thio]-6-[[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]a
 mino]-2-(1-methylethyl)phenyl]imino]-4,6-dihydro-4-oxo-7-phenyl-,
 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX
 NAME)

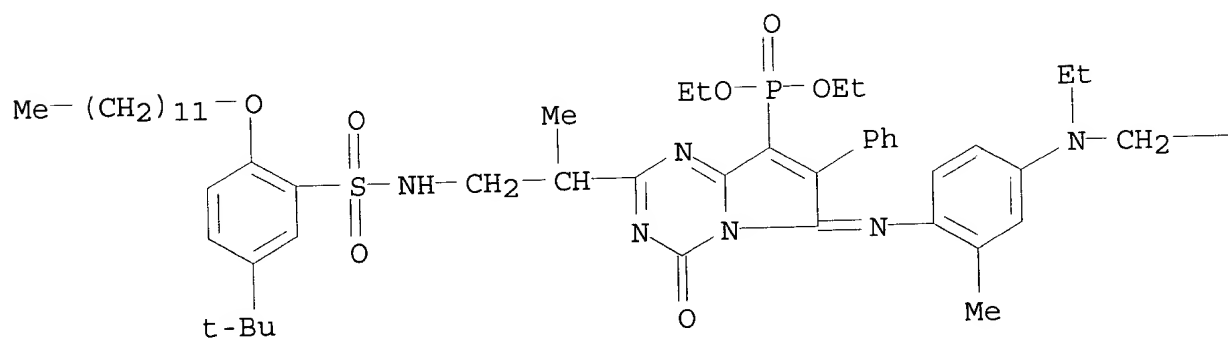


RN 363159-23-3 HCAPLUS
 CN Pyrrolo[1,2-a]-1,3,5-triazine-8-carboxylic acid,
 2-[(2-ethylhexyl)thio]-6-[[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]a
 mino]-2-methoxyphenyl]imino]-4,6-dihydro-4-oxo-7-phenyl-,
 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX
 NAME)

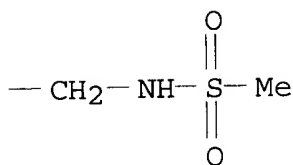


RN 363159-24-4 HCAPLUS
 CN Phosphonic acid, [2-[2-[[[5-(1,1-dimethylethyl)-2-(dodecyloxy)phenyl]sulfonyl]amino]-1-methylethyl]-6-[[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]amino]-2-methylphenyl]imino]-4,6-dihydro-4-oxo-7-phenylpyrrolo[1,2-a]-1,3,5-triazin-8-yl]-, diethyl ester (9CI) (CA INDEX NAME)

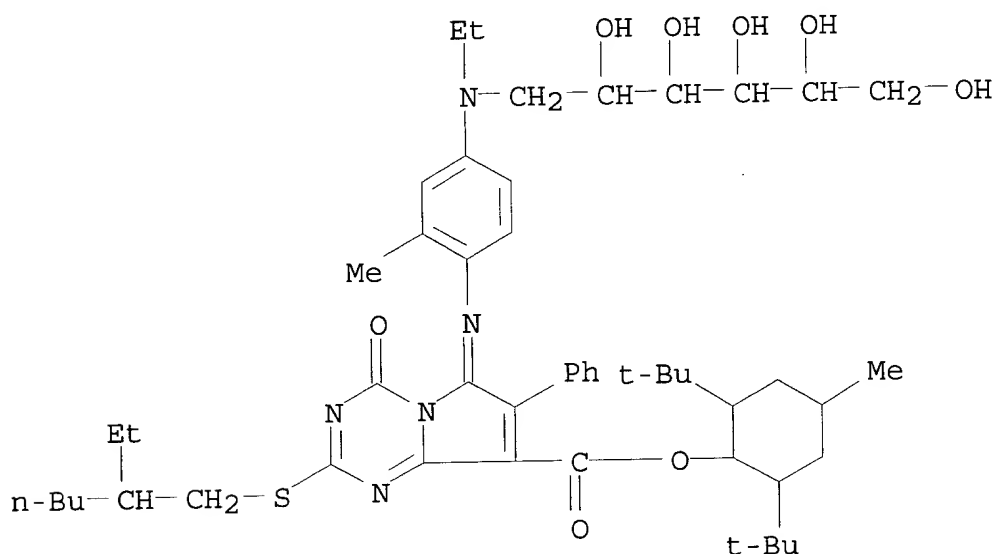
PAGE 1-A



PAGE 1-B



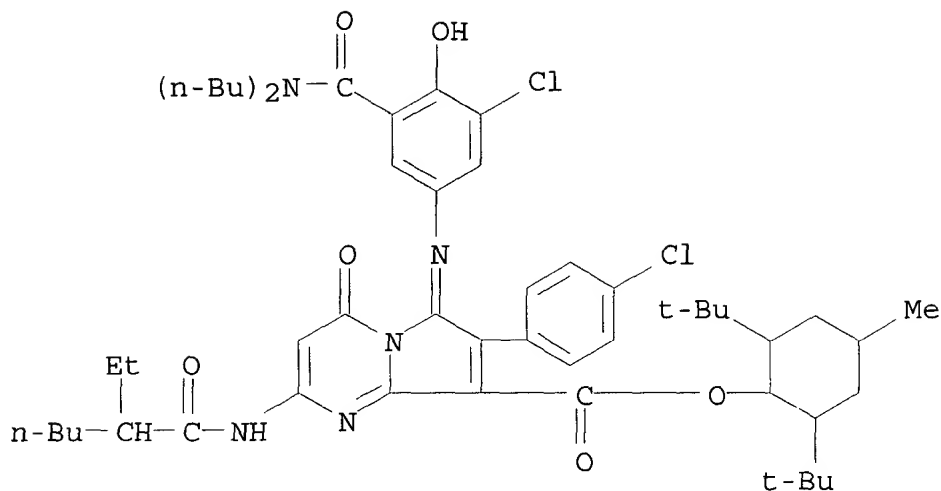
RN 363159-25-5 HCAPLUS
 CN Hexitol, 1-[[4-[[8-[[[2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl]oxy]carbonyl]-2-[(2-ethylhexyl)thio]-4-oxo-7-phenylpyrrolo[1,2-a]-1,3,5-triazin-6(4H)-ylidene]amino]-3-methylphenyl]ethylamino]-1-deoxy- (9CI) (CA INDEX NAME)



RN 363159-27-7 HCAPLUS
 CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 6-[[3-chloro-5-[(dibutylamino)carbonyl]-4-hydroxyphenyl]imino]-7-(4-chlorophenyl)-2-[(2-ethyl-1-oxohexyl)amino]-4,6-dihydro-4-oxo-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

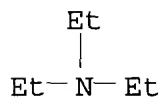
CRN 363159-26-6
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CM 2

CRN 121-44-8

CMF C6 H15 N



IC ICM C09B055-00
ICS B41J002-01; B41M005-00; C09B067-40; C09B067-46; C09D011-00;
C09D017-00

CC 42-12 (Coatings, Inks, and Related Products)
Section cross-reference(s): 41, 74

ST colored compn heterocycle **ink jet** recording; oil
soluble dye **ink jet** recording

IT **Ink-jet printing**
(colored compns. contg. oil-sol. dyes, **ink-jet**
inks, and **ink-jet** recording)

IT **Inks**
(**jet-printing**; colored compns. contg.
oil-sol. dyes, **ink-jet inks**, and
ink-jet recording)

IT **Dyes**
(oil-sol.; colored compns. contg. oil-sol. dyes, **ink-**
jet inks, and **ink-jet**
recording)

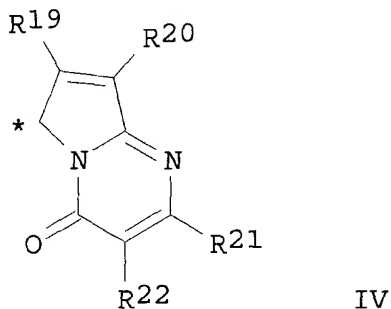
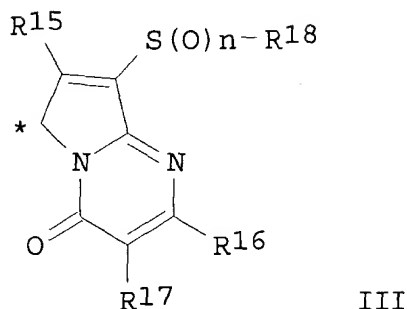
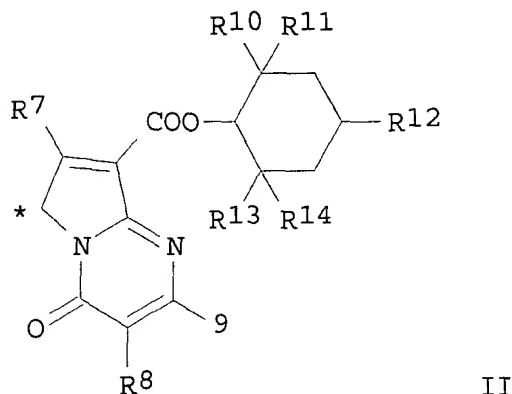
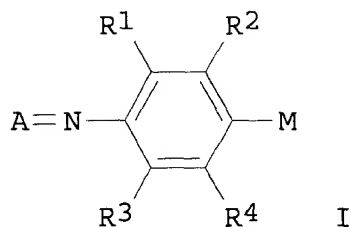
IT 309934-07-4P 347368-38-1P
(colored compns. contg. oil-sol. dyes, **ink-jet**
inks, and **ink-jet** recording)

IT 217955-18-5P 217956-11-1P 255376-06-8P 255376-11-5P
308810-83-5P 308810-84-6P 308810-85-7P
(colored compns. contg. oil-sol. dyes, **ink-jet**
inks, and **ink-jet** recording)
IT 67906-95-0 347368-40-5 347368-58-5
347368-64-3 347368-68-7 347368-70-1
363158-97-8 363158-99-0 363159-01-7 363159-02-8 363159-04-0
363159-05-1 363159-06-2 363159-07-3
363159-08-4 363159-09-5 363159-10-8
363159-11-9 363159-12-0 363159-13-1
363159-14-2 363159-15-3 363159-16-4
363159-17-5 363159-18-6 363159-20-0
363159-21-1 363159-22-2 363159-23-3
363159-24-4 363159-25-5 363159-27-7
363161-29-9
(colored compns. contg. oil-sol. dyes, **ink-jet**
inks, and **ink-jet** recording)
IT 92-09-1 372-09-8, Cyanoacetic acid 760-67-8, 2-Ethylhexanoyl
chloride 2318-25-4 16182-04-0, Ethoxycarbonyl isothiocyanate
18908-66-2, 2-Ethylhexyl bromide 25646-77-9 82585-51-1
163119-16-2, 2,6-Di-tert-butyl-4-methylcyclohexanol 217955-03-8
(colored compns. contg. oil-sol. dyes, **ink-jet**
inks, and **ink-jet** recording)

L17 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:481949 HCAPLUS
DOCUMENT NUMBER: 135:78220
TITLE: Pyrrolo[1,2-a]pyrimidine azomethine dyes
INVENTOR(S): Mizukawa, Hiroki
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 40 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001181526	A2	20010703	JP 1999-367429	19991224

OTHER SOURCE(S): MARPAT 135:78220
GI



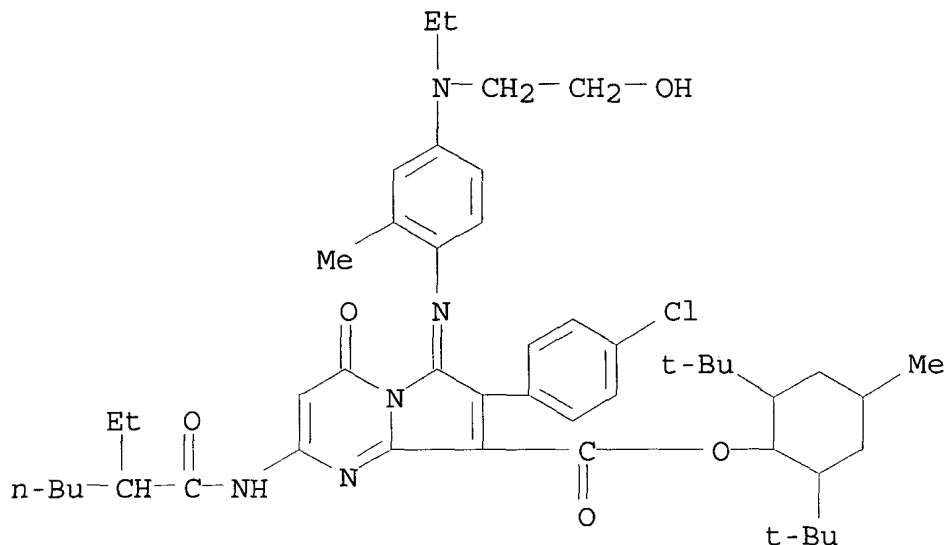
AB The dyes, useful for color electrophotog., **ink-jet** or thermal **printing**, filters for solid-state images and liq. crystal displays, and Ag halide photog. materials, are shown as I (A = coupler residue II-IV; R1-R4 = H, substituent; M = OY, NR5R6; Y = H, cations for charge balance; R5, R6 = alkyl, aryl, heterocycle, acyl, sulfonyl; R1 and R2, R3 and R4, R5 and R6, R2 and R5, and/or R4 and R6 may form ring; R7-R9, R15-R17 = H, substituent; R10, R13 = alkyl; R11, R12, R14 = H, alkyl; R18 = alkyl, aryl, heterocycle, amino, anilino; n = 1, 2; R19 = aryl, arom. heterocycle; R20, R22 = H, substituent; R21 = NR23R24, alkoxy, aryloxy, heterocyclic oxy, alkylthio, arylthio, heterocyclic thio; R23, R24 = H, alkyl, aryl, acyl, alkoxycarbonyl, carbamoyl, alkylsulfonyl, arylsulfonyl; R23 and R24 may form 5-7-membered ring; * shows a linkage position). I (R1 = Me, R2 = R3 = R4 = H, M = NEtCH2CH2OH, A = II, R 7 = 4-Cl-C6H4, R8 = C6F5CONH, R9 = R11 = R14 = H, R10 = R13 = tert-Bu, R12 = Me) showed max. absorption wavelength (λ_{max}) 652.1 nm (in EtOAc) and 450 nm/ λ_{max} = 0.076.

IT 347368-38-1P 347368-40-5P 347368-42-7P
347368-46-1P

(pyrrolo[1,2-a]pyrimidine azomethine dyes)

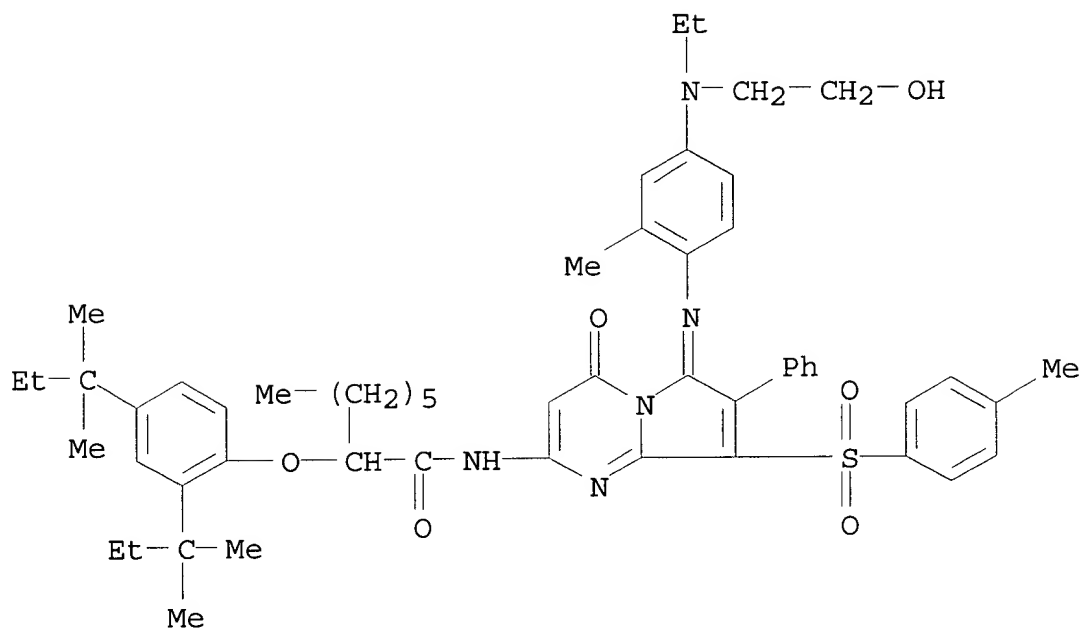
RN 347368-38-1 HCAPLUS

CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 7-(4-chlorophenyl)-6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-2-[(2-ethyl-1-oxohexyl)amino]-4,6-dihydro-4-oxo-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)



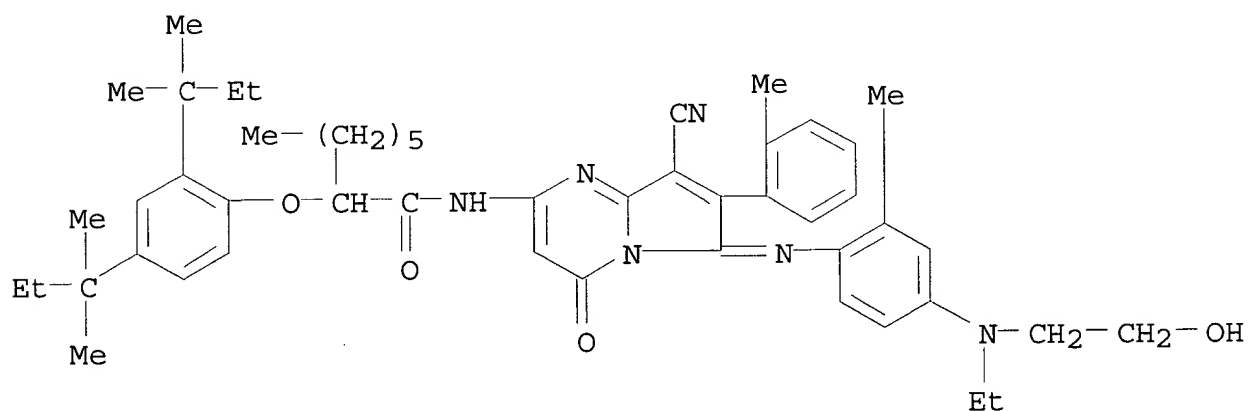
RN 347368-40-5 HCAPLUS

CN Octanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-4,6-dihydro-8-[(4-methylphenyl)sulfonyl]-4-oxo-7-phenylpyrrolo[1,2-a]pyrimidin-2-yl]- (9CI) (CA INDEX NAME)



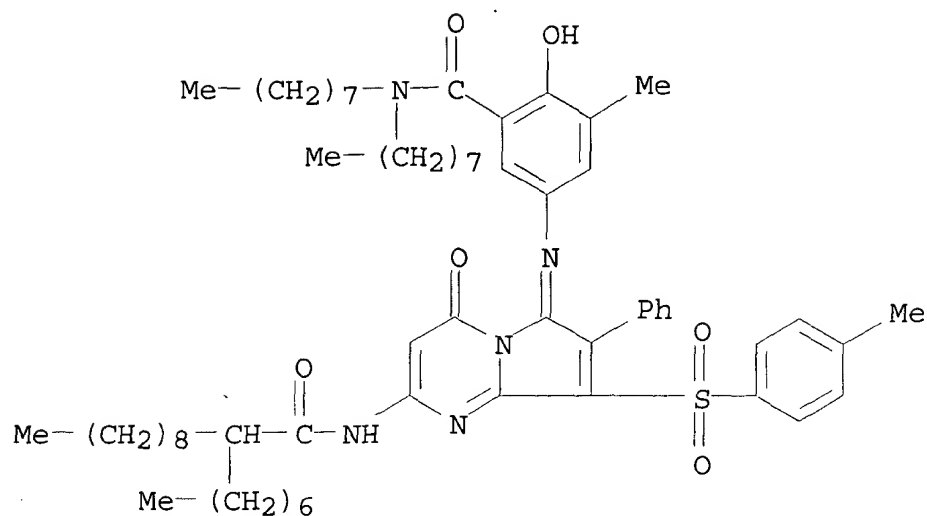
RN 347368-42-7 HCAPLUS

CN Octanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[8-cyano-6-[[4-ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-4,6-dihydro-7-(2-methylphenyl)-4-oxopyrrolo[1,2-a]pyrimidin-2-yl-(9CI) (CA INDEX NAME)



RN 347368-46-1 HCAPLUS

CN Benzamide, 5-[[2-[(2-heptyl-1-oxoundecyl)amino]-8-[(4-methylphenyl)sulfonyl]-4-oxo-7-phenylpyrrolo[1,2-a]pyrimidin-6(4H)-ylidene]amino]-2-hydroxy-3-methyl-N,N-dioctyl-(9CI) (CA INDEX NAME)

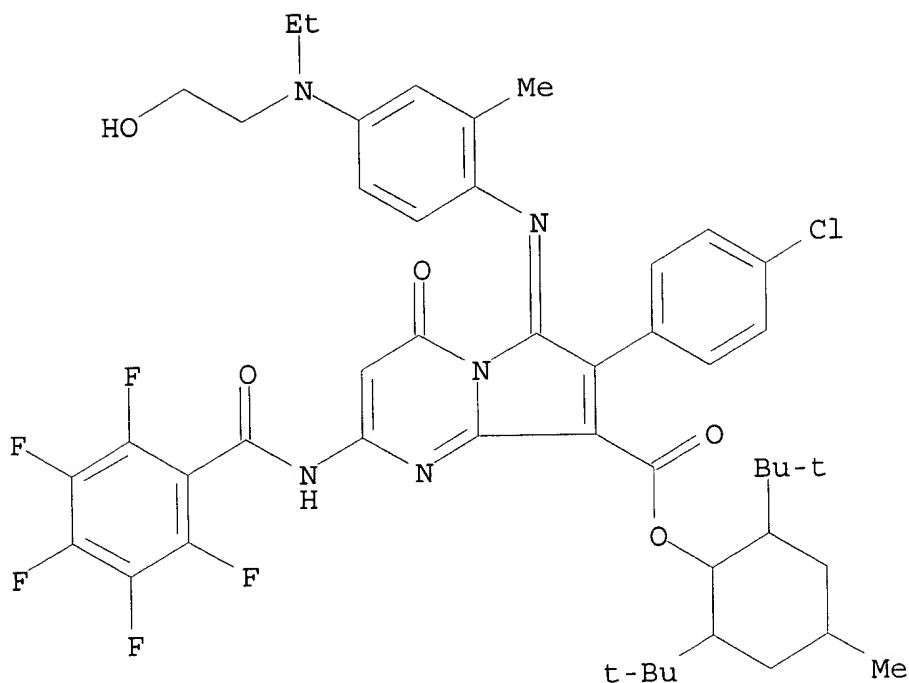


IT 347368-49-4 347368-52-9 347368-54-1
 347368-56-3 347368-58-5 347368-60-9
 347368-62-1 347368-64-3 347368-66-5
 347368-68-7 347368-70-1 347368-72-3
 347368-74-5 347368-76-7 347368-80-3
 347368-82-5 347368-86-9 347368-88-1

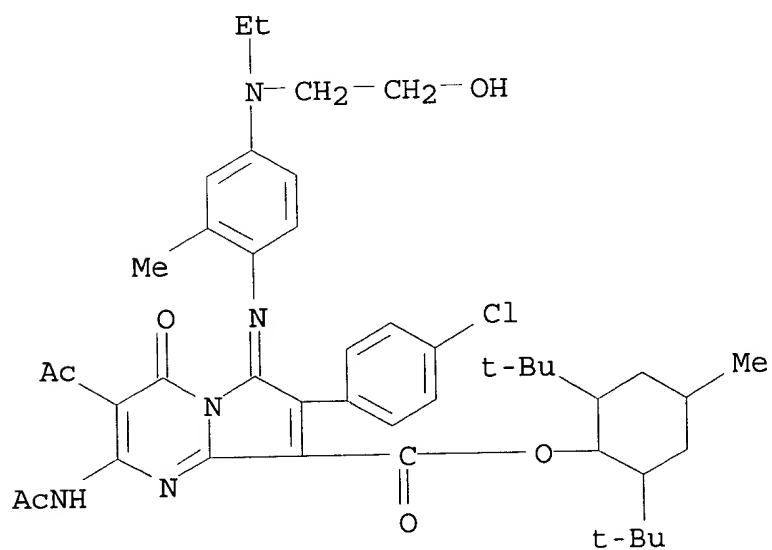
(pyrrolo[1,2-a]pyrimidine azomethine dyes)

RN 347368-49-4 HCAPLUS

CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 7-(4-chlorophenyl)-6-[[4-ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-4,6-dihydro-4-oxo-2-[(pentafluorobenzoyl)amino]-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)

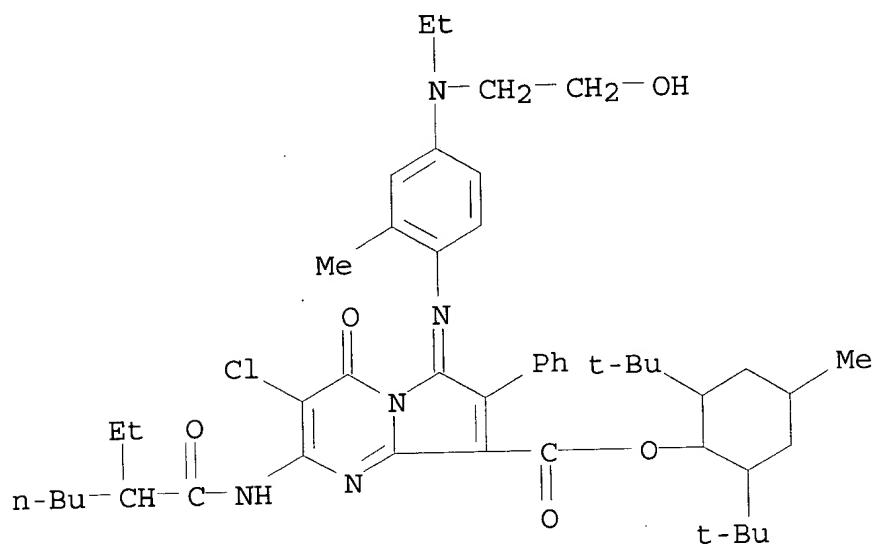


RN 347368-52-9 HCAPLUS
 CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 3-acetyl-2-(acetylamino)-7-(4-chlorophenyl)-6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-4,6-dihydro-4-oxo-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)

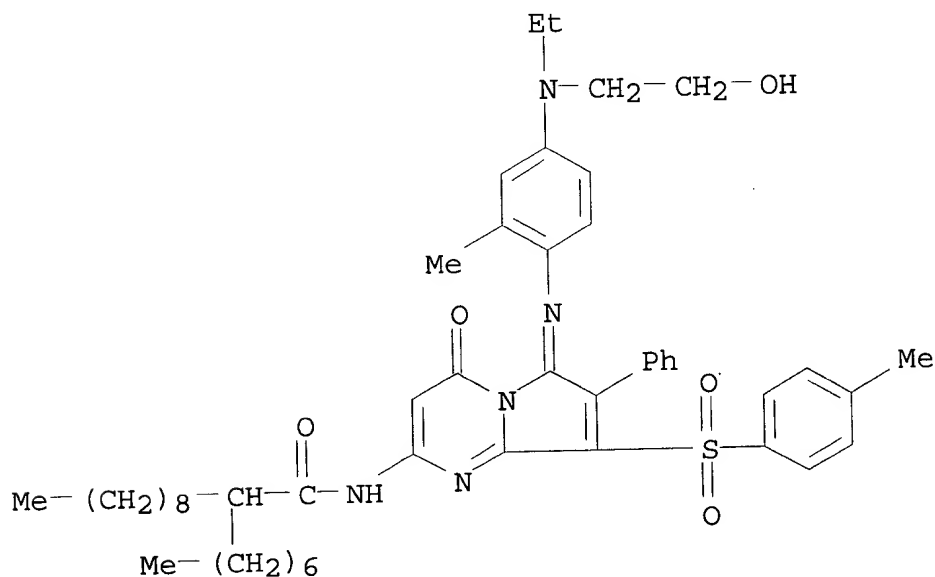


RN 347368-54-1 HCAPLUS

CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 3-chloro-6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-2-[(2-ethyl-1-oxohexyl)amino]-4,6-dihydro-4-oxo-7-phenyl-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)

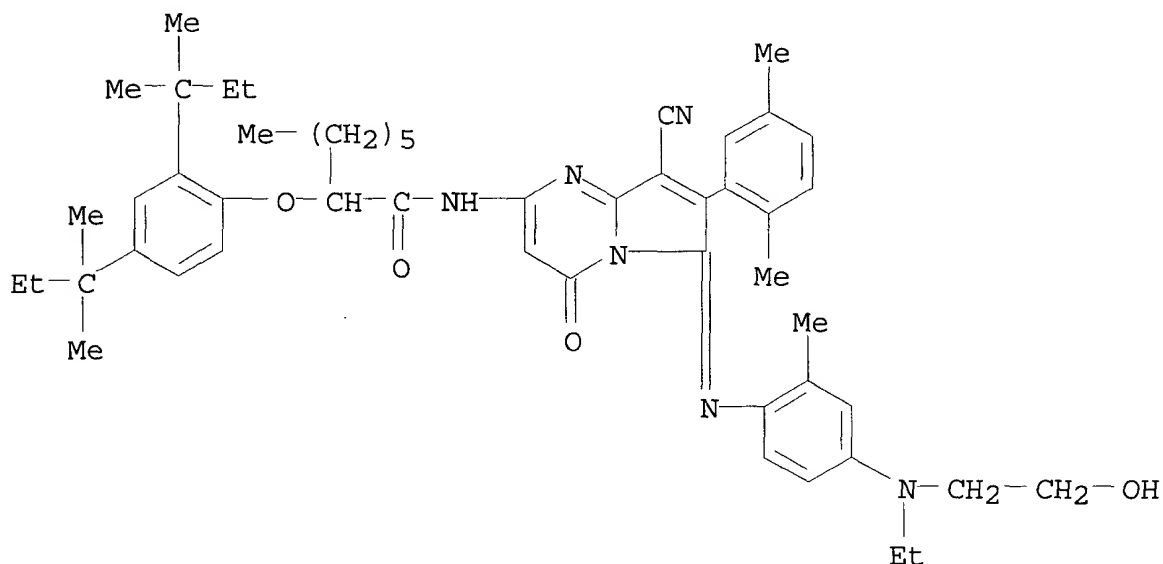


RN 347368-56-3 HCAPLUS
 CN Undecanamide, N-[6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-4,6-dihydro-8-[(4-methylphenyl)sulfonyl]-4-oxo-7-phenylpyrrolo[1,2-a]pyrimidin-2-yl]-2-heptyl- (9CI) (CA INDEX NAME)



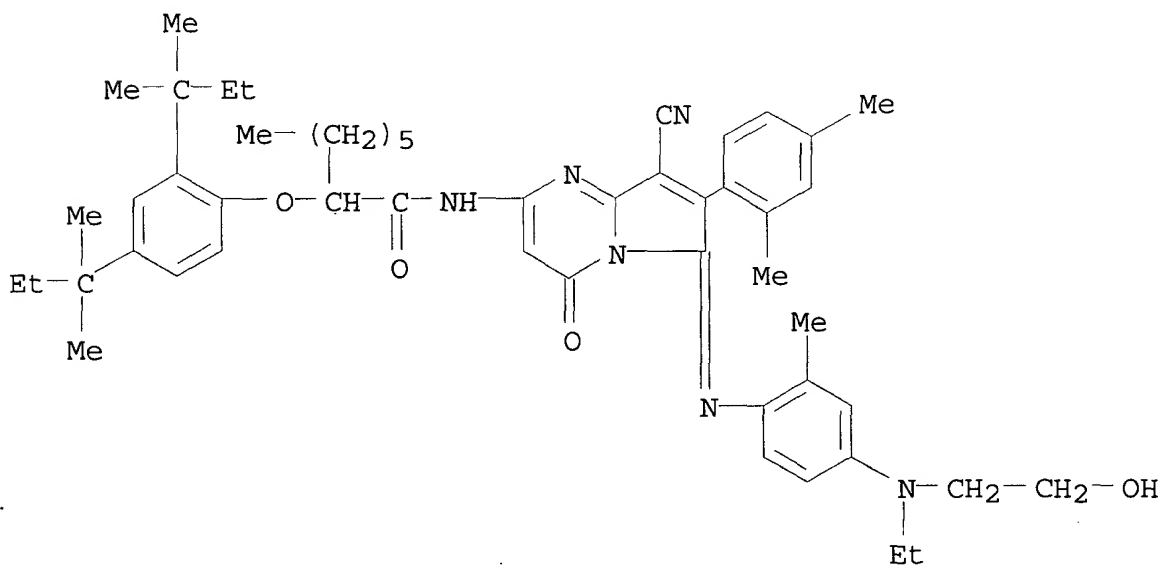
RN 347368-58-5 HCAPLUS

CN Octanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[8-cyano-7-(2,5-dimethylphenyl)-6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-4,6-dihydro-4-oxopyrrolo[1,2-a]pyrimidin-2-yl]-(9CI) (CA INDEX NAME)



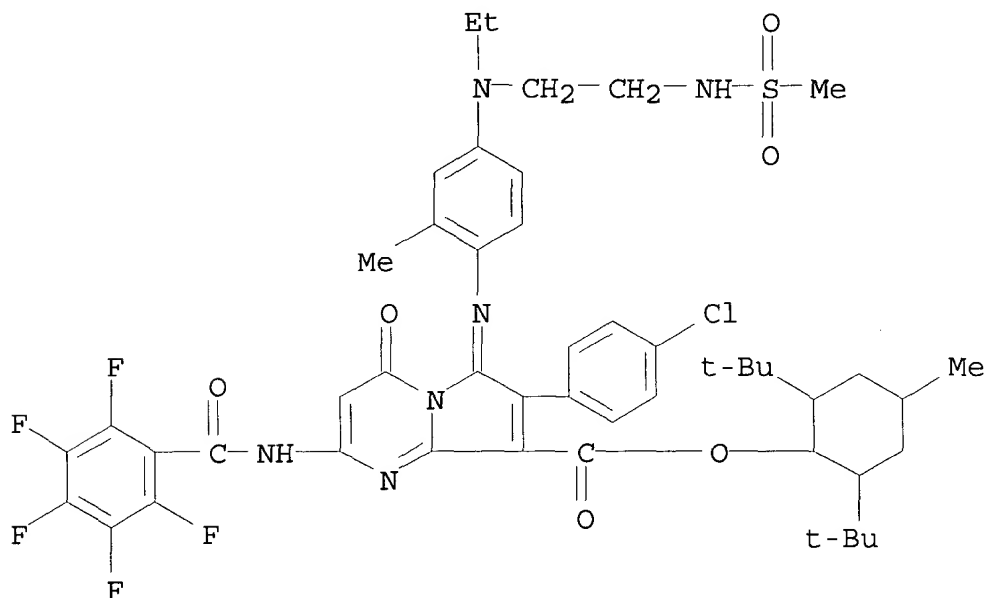
RN 347368-60-9 HCAPLUS

CN Octanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[8-cyano-7-(2,4-dimethylphenyl)-6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-4,6-dihydro-4-oxopyrrolo[1,2-a]pyrimidin-2-yl]-(9CI) (CA INDEX NAME)



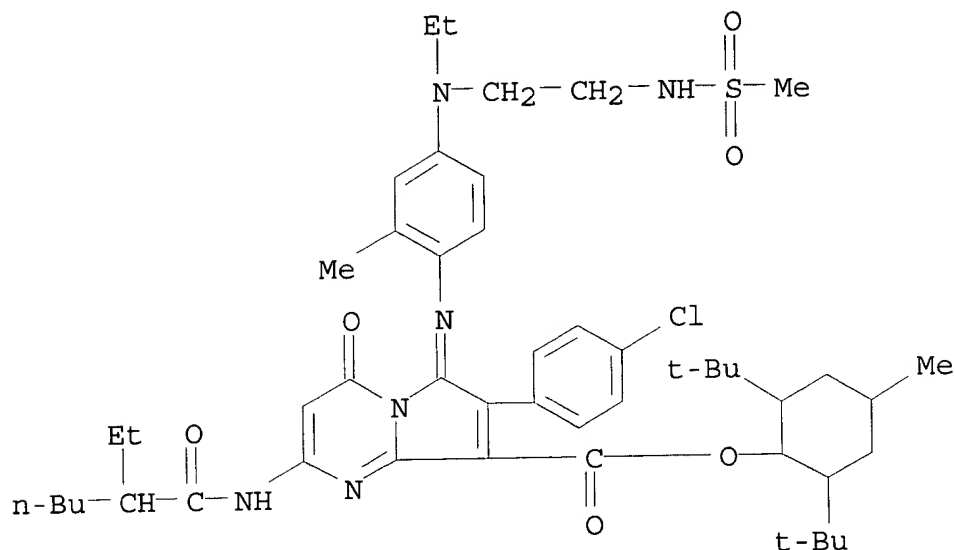
RN 347368-62-1 HCAPLUS

CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 7-(4-chlorophenyl)-6-[[4-[ethyl 2-[(methylsulfonyl)amino]ethyl]amino]-2-methylphenyl]imino]-4,6-dihydro-4-oxo-2-[(pentafluorobenzoyl)amino]-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)

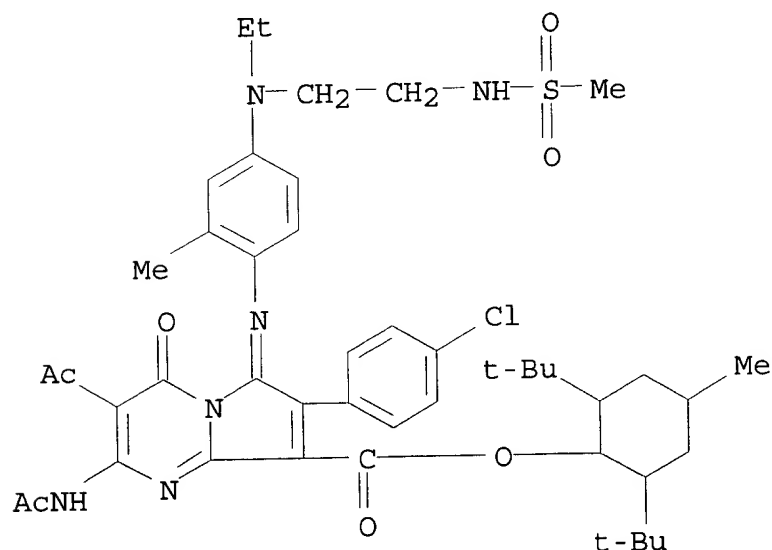


RN 347368-64-3 HCAPLUS

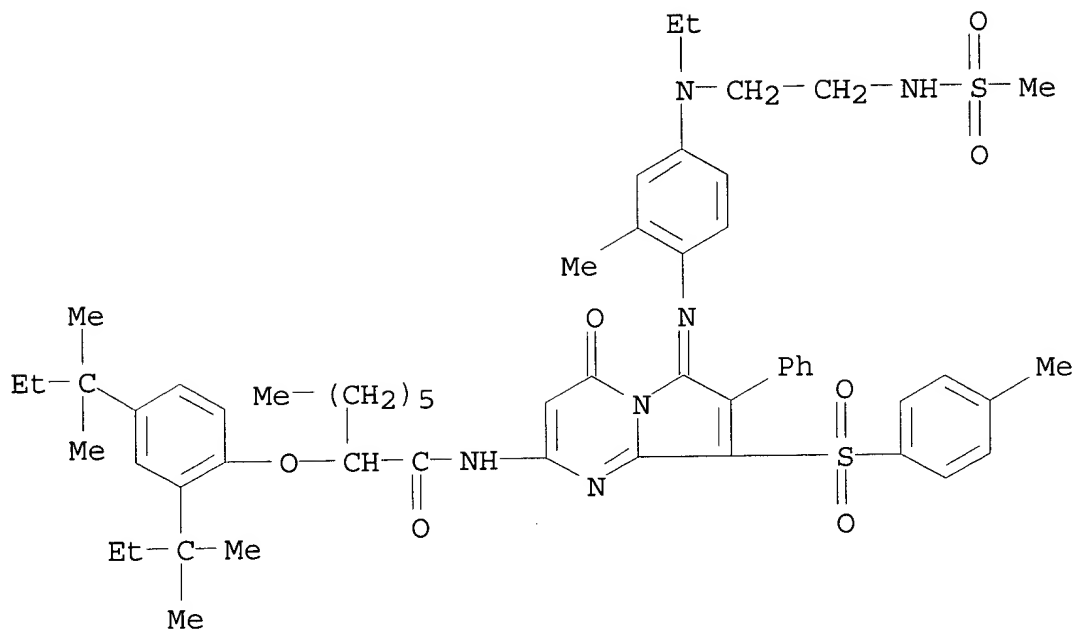
CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 7-(4-chlorophenyl)-6-[[4-[ethyl 2-[(methylsulfonyl)amino]ethyl]amino]-2-methylphenyl]imino]-2-[(2-ethyl-1-oxohexyl)amino]-4,6-dihydro-4-oxo-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)



RN 347368-66-5 HCAPLUS
 CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 3-acetyl-2-(acetylamino)-
 7-(4-chlorophenyl)-6-[[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]amino]
]-2-methylphenyl]imino]-4,6-dihydro-4-oxo-, 2,6-bis(1,1-
 dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)

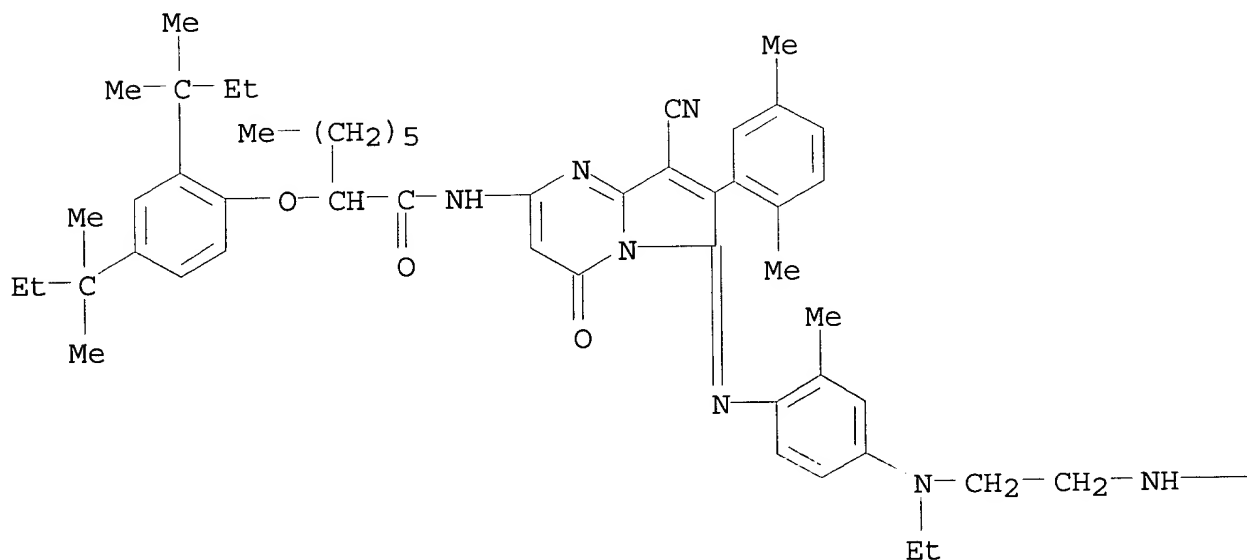


RN 347368-68-7 HCAPLUS
 CN Octanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[6-[[4-[ethyl[2-
 [(methylsulfonyl)amino]ethyl]amino]-2-methylphenyl]imino]-4,6-
 dihydro-8-[(4-methylphenyl)sulfonyl]-4-oxo-7-phenylpyrrolo[1,2-
 a]pyrimidin-2-yl]- (9CI) (CA INDEX NAME)

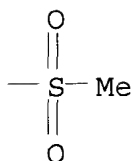


RN 347368-70-1 HCAPLUS
 CN Octanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[8-cyano-7-(2,5-dimethylphenyl)-6-[[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]amino]-2-methylphenyl]imino]-4,6-dihydro-4-oxopyrrolo[1,2-a]pyrimidin-2-yl]-(9CI) (CA INDEX NAME)

PAGE 1-A



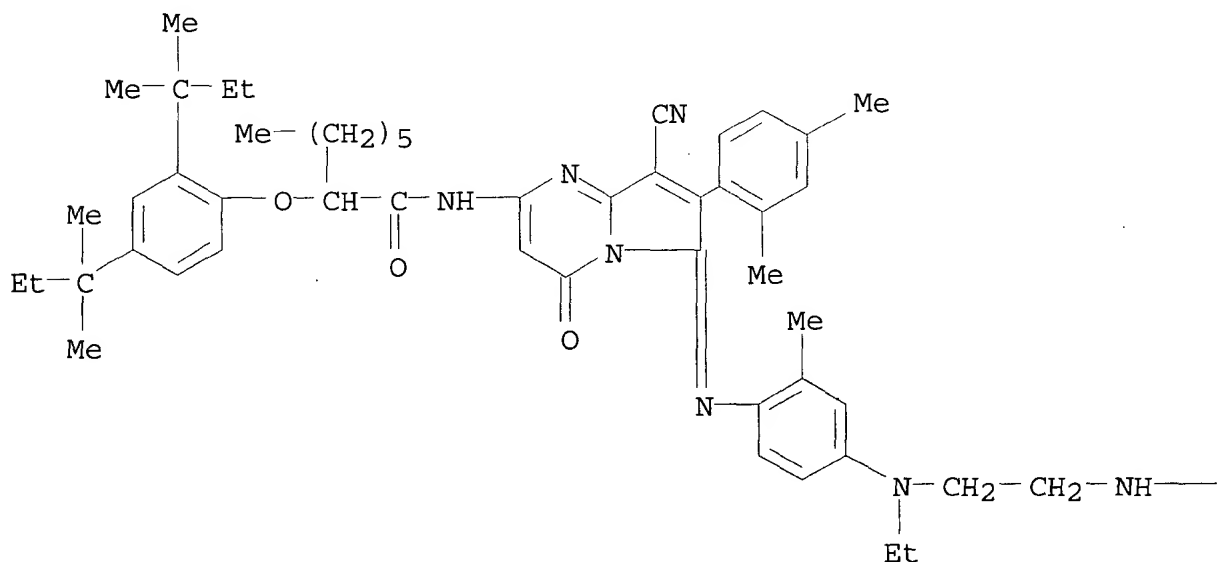
PAGE 1-B



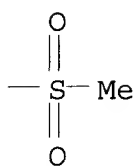
RN 347368-72-3 HCAPLUS

CN Octanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[8-cyano-7-(2,4-dimethylphenyl)-6-[[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]amino]-2-methylphenyl]imino]-4,6-dihydro-4-oxopyrrolo[1,2-a]pyrimidin-2-yl]-(9CI) (CA INDEX NAME)

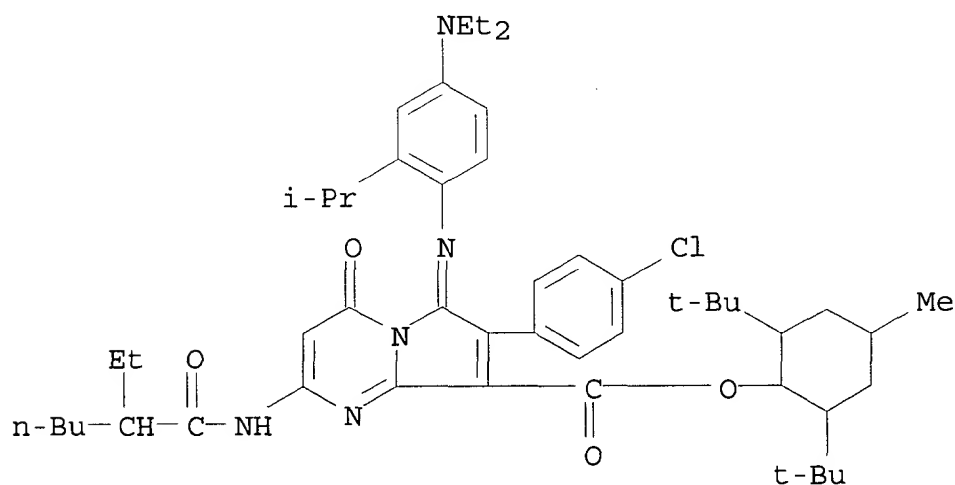
PAGE 1-A



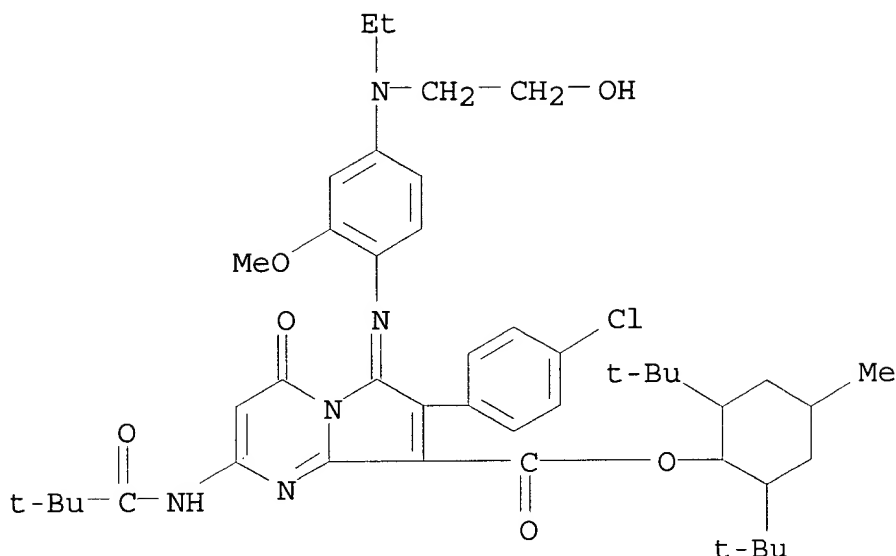
PAGE 1-B



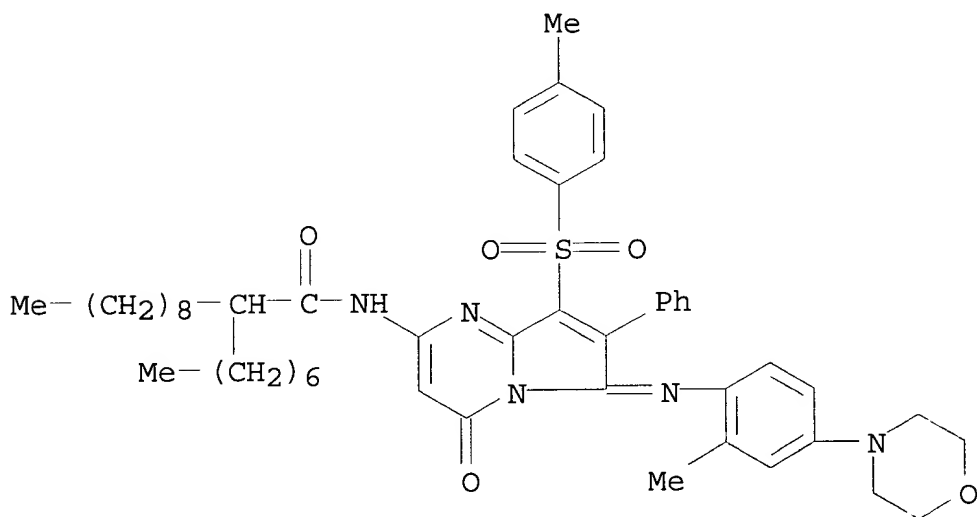
RN 347368-74-5 HCAPLUS
 CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 7-(4-chlorophenyl)-6-[[4-(diethylamino)-2-(1-methylethyl)phenyl]imino]-2-[(2-ethyl-1-oxohexyl)amino]-4,6-dihydro-4-oxo-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)



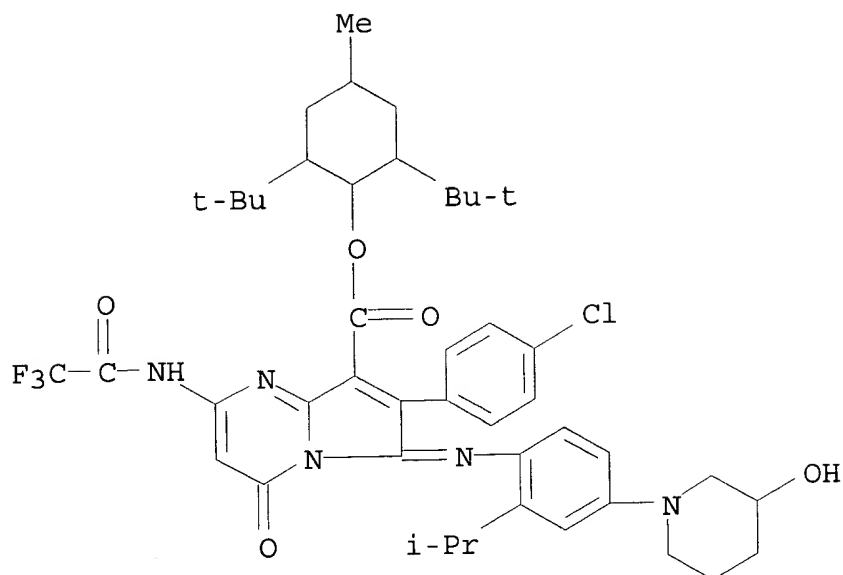
RN 347368-76-7 HCAPLUS
 CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 7-(4-chlorophenyl)-2-[(2,2-dimethyl-1-oxopropyl)amino]-6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methoxyphenyl]imino]-4,6-dihydro-4-oxo-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)



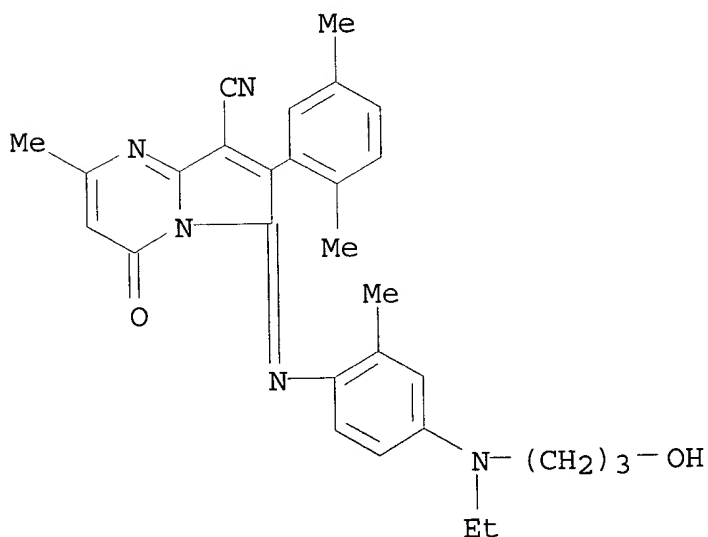
RN 347368-80-3 HCAPLUS
 CN Undecanamide, N-[4,6-dihydro-6-[[2-methyl-4-(4-morpholinyl)phenyl]imino]-8-[(4-methylphenyl)sulfonyl]-4-oxo-7-phenylpyrrolo[1,2-a]pyrimidin-2-yl]-2-heptyl- (9CI) (CA INDEX NAME)



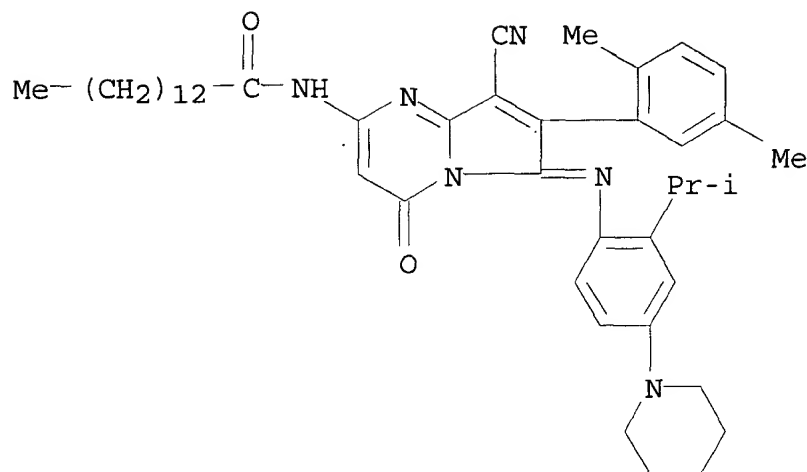
RN 347368-82-5 HCAPLUS
 CN Pyrrolo[1,2-a]pyrimidine-8-carboxylic acid, 7-(4-chlorophenyl)-4,6-dihydro-6-[[4-(3-hydroxy-1-piperidinyl)-2-(1-methylethyl)phenyl]imino]-4-oxo-2-[(trifluoroacetyl)amino]-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)



RN 347368-86-9 HCAPLUS
 CN Pyrrolo[1,2-a]pyrimidine-8-carbonitrile, 7-(2,5-dimethylphenyl)-6-
 [[4-[ethyl(3-hydroxypropyl)amino]-2-methylphenyl]imino]-4,6-dihydro-
 2-methyl-4-oxo- (9CI) (CA INDEX NAME)



RN 347368-88-1 HCAPLUS
 CN Tetradecanamide, N-[8-cyano-7-(2,5-dimethylphenyl)-4,6-dihydro-6-[[2-
 (1-methylethyl)-4-(1-piperidinyl)phenyl]imino]-4-oxopyrrolo[1,2-
 a]pyrimidin-2-yl]- (9CI) (CA INDEX NAME)



IC ICM C09B055-00
ICS B41M005-30; G02B005-22; G03C007-38
CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and
Photographic Sensitizers)
Section cross-reference(s): 74
IT 347368-38-1P 347368-40-5P 347368-42-7P
347368-46-1P

(pyrrolo[1,2-a]pyrimidine azomethine dyes)
IT 347368-49-4 347368-52-9 347368-54-1
347368-56-3 347368-58-5 347368-60-9
347368-62-1 347368-64-3 347368-66-5
347368-68-7 347368-70-1 347368-72-3
347368-74-5 347368-76-7 347368-78-9
347368-80-3 347368-82-5 347368-84-7
347368-86-9 347368-88-1 347368-90-5

(pyrrolo[1,2-a]pyrimidine azomethine dyes)

L17 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:835246 HCAPLUS

DOCUMENT NUMBER: 134:18552

TITLE: Pyrrolo[1,2-a]-1,3,5-triazin-4-one-based
azomethine dyes with good absorption properties

INVENTOR(S): Mizukawa, Hiroki; Kawagishi, Toshio

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

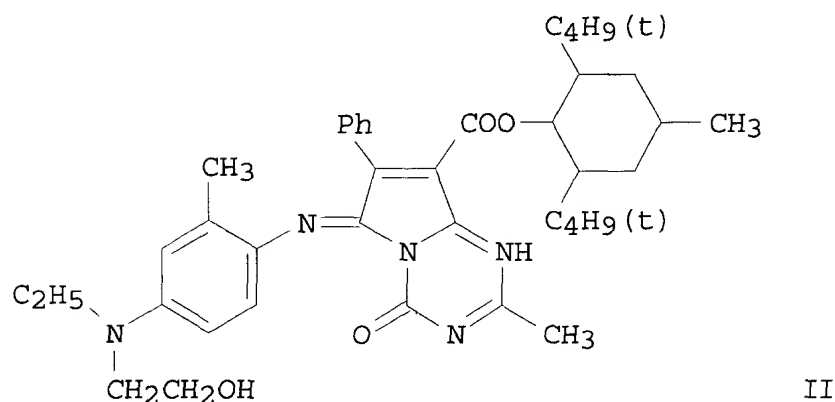
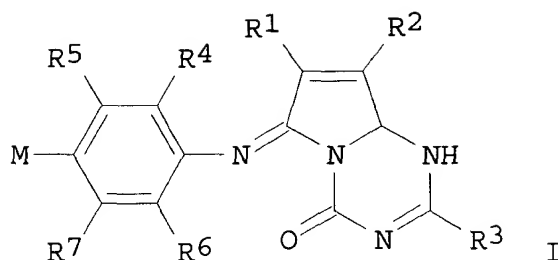
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2000327939	A2	20001128	JP 1999-142259	19990521
OTHER SOURCE(S):		MARPAT 134:18552		

GI

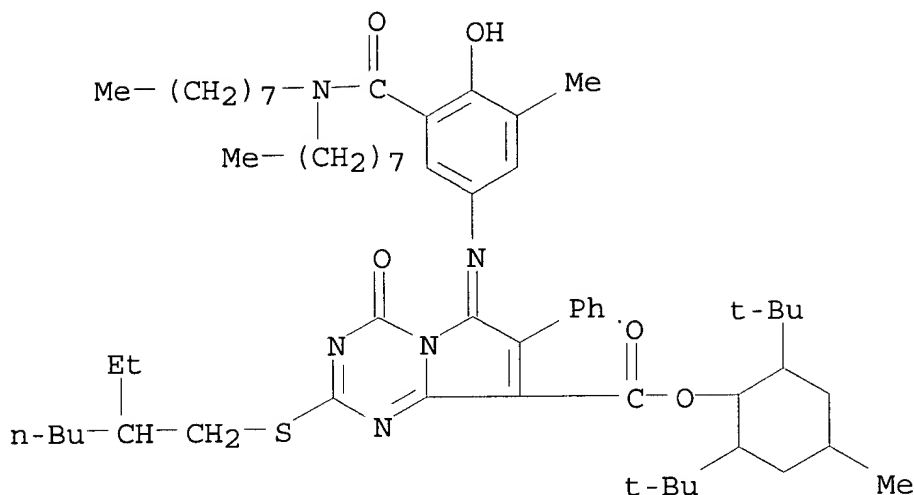


AB The dyes, useful for color electrophotog., **ink-jet printing**, heat-sensitive image forming systems, etc., comprise I [R1 = H, substituent (except CN); R2 = alkyl, aryl, heterocyclic group, etc.; R3-R7 = H, substituent; M = OY, NR8R9; Y = H, cation; R8, R9 = alkyl, aryl, heterocyclic group, acyl, sulfonyl]. Et acetate soln. of II (manufd. from substituted pyrrolo[1,2-a]-1,3,5-triazin-4-one and p-phenylenediamine compd.) showed max. absorption wavelength 664.7 nm and ratio of absorption at 450 nm and 664.7 nm 0.025.

IT **309934-08-5P**
 (pyrrolo[1,2-a]-1,3,5-triazin-4-one-based azomethine dyes)

RN 309934-08-5 HCAPLUS

CN Pyrrolo[1,2-a]-1,3,5-triazine-8-carboxylic acid,
 6-[[3-[(diethylamino)carbonyl]-4-hydroxy-5-methylphenyl]imino]-2-[(2-ethylhexyl)thio]-4,6-dihydro-4-oxo-7-phenyl-, 2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX NAME)

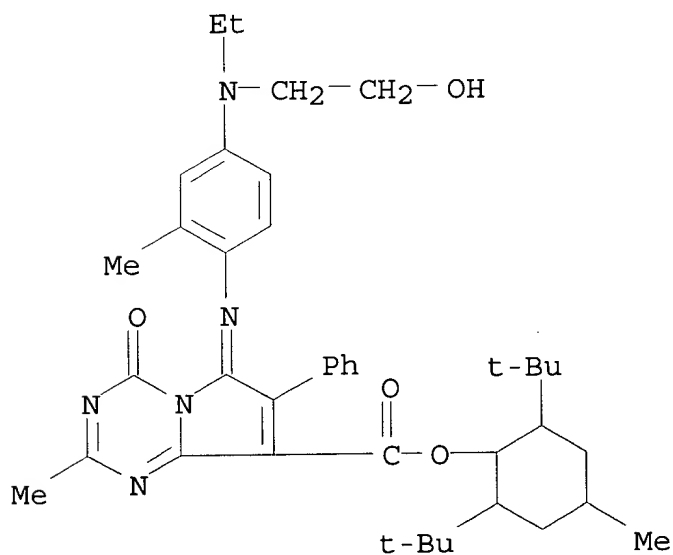


IT 309934-06-3P 309934-07-4P

(pyrrolo[1,2-a]-1,3,5-triazin-4-one-based azomethine dyes with)

RN 309934-06-3 HCAPLUS

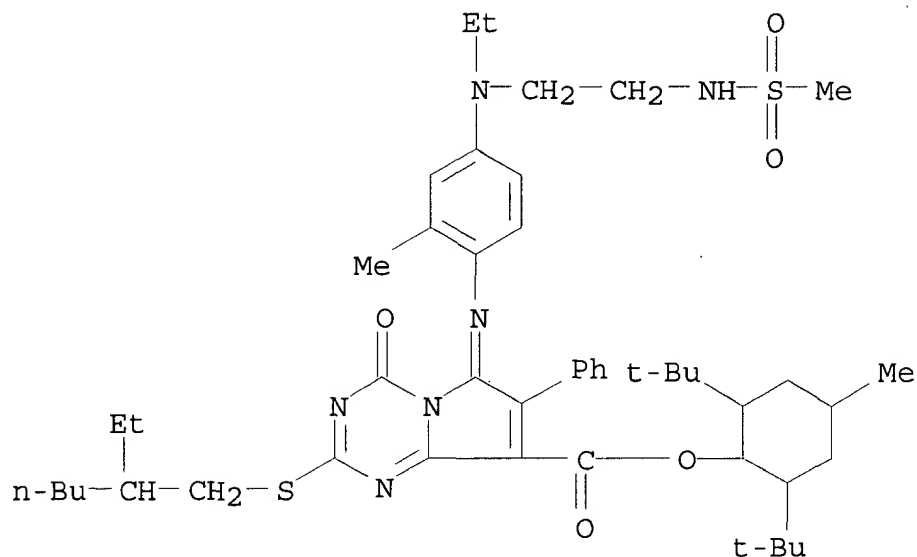
CN Pyrrolo[1,2-a]-1,3,5-triazine-8-carboxylic acid,
6-[[4-[ethyl(2-hydroxyethyl)amino]-2-methylphenyl]imino]-4,6-dihydro-
2-methyl-4-oxo-7-phenyl-, 2,6-bis(1,1-dimethylethyl)-4-
methylcyclohexyl ester (9CI) (CA INDEX NAME)



RN 309934-07-4 HCAPLUS

CN Pyrrolo[1,2-a]-1,3,5-triazine-8-carboxylic acid,
2-[(2-ethylhexyl)thio]-6-[[4-[ethyl[2-[(methylsulfonyl)amino]ethyl]a
mino]-2-methylphenyl]imino]-4,6-dihydro-4-oxo-7-phenyl-,
2,6-bis(1,1-dimethylethyl)-4-methylcyclohexyl ester (9CI) (CA INDEX

NAME)



IC ICM C09B055-00
 CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and
 Photographic Sensitizers)
 Section cross-reference(s): 28, 42, 74
 ST pyrrolotriazinone azomethine dye color electrophotog; image forming
 system pyrrolotriazinone azomethine dye; **ink jet**
printing pyrrolotriazinone azomethine dye
 IT Azo dyes
 Electrophotographic toners
Ink-jet printing
 (pyrrolo[1,2-a]-1,3,5-triazin-4-one-based azomethine dyes)
 IT **309934-08-5P**
 (pyrrolo[1,2-a]-1,3,5-triazin-4-one-based azomethine dyes)
 IT **309934-06-3P 309934-07-4P**
 (pyrrolo[1,2-a]-1,3,5-triazin-4-one-based azomethine dyes with)

L17 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:750345 HCAPLUS

DOCUMENT NUMBER: 133:323119

TITLE: Water-thinned **inks** for **ink**
jet printing with good waterand light resistance and storage stability
 INVENTOR(S): Ohi, Toru; Matsuzaki, Yoriaki; Ohkuma, Tadashi;
 Kogo, Osamu

PATENT ASSIGNEE(S): Mitsui Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

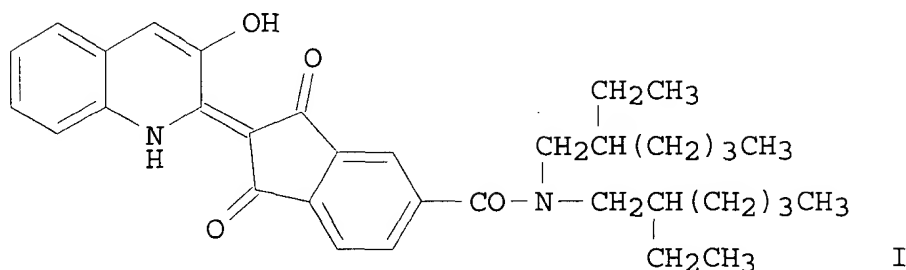
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000297234	A2	20001024	JP 1999-105389	19990413

GI



I

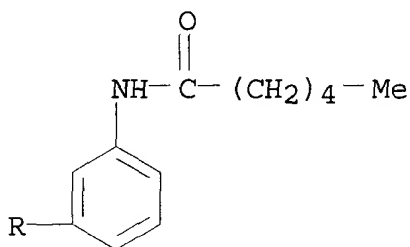
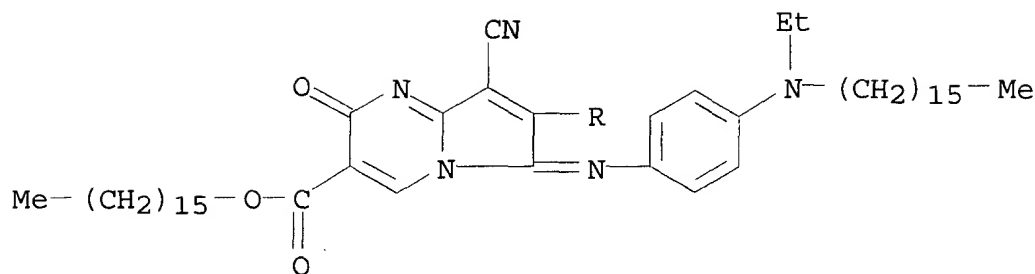
AB The **inks** contain polymer dispersions and oil-sol. dyes with .ltoreq.1% water soly. and .gtoreq.10% PhMe soly. Thus, a 15% water-thinned yellow **ink** contg. di-Me 5-sodiosulfoisophthalate-di-Me terephthalate-ethylene glycol-tricyclodecanedimethanol copolymer dispersion (av. diam. 0.1 .mu.m) colored with oil-sol. yellow dye I (PhMe soly. 35%) showed no clogging after staying at 40.degree. for 2 mo. and gave a printed image with water and light resistance and no feathering.

IT 303022-13-1

(oil-sol. dye; water-thinned **jet-printing inks** with good water and light resistance and storage stability)

RN 303022-13-1 HCAPLUS

CN Pyrrolo[1,2-a]pyrimidine-3-carboxylic acid, 8-cyano-6-[[4-(ethylhexadecylamino)phenyl]imino]-2,6-dihydro-2-oxo-7-[3-[(1-oxohexyl)amino]phenyl]-, hexadecyl ester (9CI) (CA INDEX NAME)



- IC ICM C09D011-00
ICS B41J002-01; B41M005-00
- CC 42-12 (Coatings, Inks, and Related Products)
- ST water thinned **jet printing ink**
polymer; oil soluble dye polymer dispersion **ink**;
sodiosulfoisophthalate terephthalate ethylene cyclodecanedimethanol
copolyester dispersion **ink**; feathering water light
resistance polyester dispersion **ink**
- IT Light-resistant materials
Light-resistant materials
(**inks**; water-thinned **jet-printing inks** with good water and light resistance and storage stability)
- IT Water-resistant materials
(**jet-printing inks**; water-thinned **jet-printing inks** with good water and light resistance and storage stability)
- IT **Inks**
(**jet-printing**, anticlogging, storage-stable; water-thinned **jet-printing inks** with good water and light resistance and storage stability)
- IT **Inks**
Inks
(**jet-printing**, water-resistant; water-thinned **jet-printing inks** with good water and light resistance and storage stability)
- IT **Inks**
(**jet-printing**, water-thinned; water-thinned **jet-printing inks** with good water and light resistance and storage stability)

IT **Inks**
Inks
(light-resistant; water-thinned **jet-printing**
inks with good water and light resistance and storage
stability)

IT **Dyes**
(oil-sol.; water-thinned **jet-printing**
inks with good water and light resistance and storage
stability)

IT **Polyesters, uses**
(water-thinned **jet-printing inks**
with good water and light resistance and storage stability)

IT **Polymers, uses**
(water-thinned **jet-printing inks**
with good water and light resistance and storage stability)

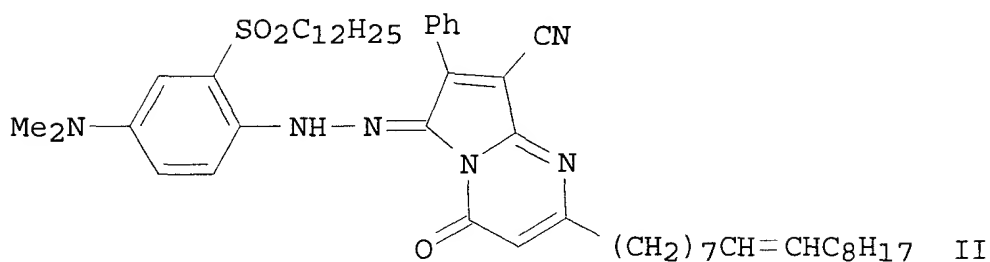
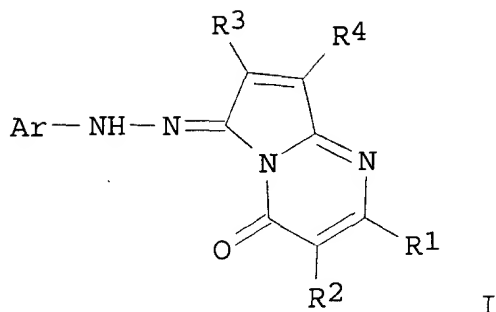
IT 119401-54-6 142358-19-8 159880-81-6 264602-09-7 271246-37-8
303022-08-4 303022-10-8 303022-12-0 **303022-13-1**
(oil-sol. dye; water-thinned **jet-printing**
inks with good water and light resistance and storage
stability)

IT 81977-96-0P, Dimethyl isophthalate-dimethyl terephthalate-dimethyl
5-sodiosulfoisophthalate-ethylene glycol-neopentyl glycol copolymer
213381-36-3P, Dimethyl 5-sodiosulfoisophthalate-dimethyl
terephthalate-ethylene glycol-tricyclodecanedimethanol copolymer
(water-thinned **jet-printing inks**
with good water and light resistance and storage stability)

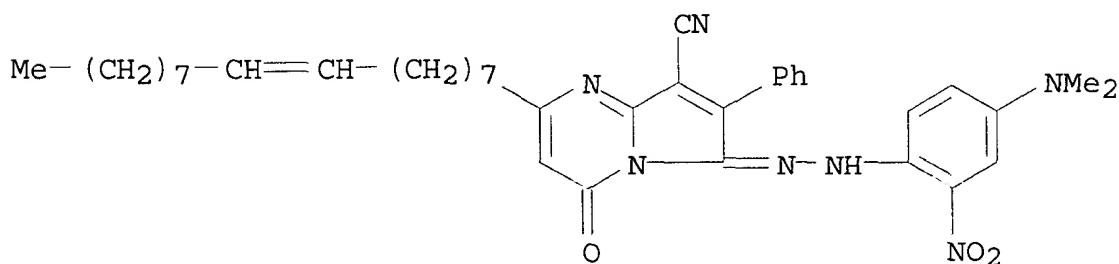
=> d l18 1-10 cbib abs fhitrn hitrn

L18 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2002 ACS
2001:271615 Document No. 134:297170 Hydrazone cyan dyes having good
color hue. Yanagihara, Naoto; Kawabuchi, Tatsuo; Matsushita,
Tetsunori; Nomura, Kimiatsu; Takeuchi, Yosuke; Yamada, Hisao (Fuji
Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001106931
A2 20010417, 81 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
1999-288470 19991008.

GI



- AB Dyes have the structure I, where Ar is an aryl or a heterocyclic, R1-4 is an H, halogen, CN, NH2, NO2, OH, CO2H, SO3H, quaternary ammonium, carboxylate, sulfonate, alkyl, alkenyl, alkynyl, aryl, acyl, carbamoyl, sulfamoyl, alkoxy carbonyl, aryloxy carbonyl, acyloxy, alkoxy, aryloxy, alkylthio, arylthio, alkylsulfonyl, arylsulfonyl, alkylphosphoryl, arylphosphoryl, or substituted amino group. Thus, II was prepd.
- IT **334905-91-8P**
(hydrazone cyan dyes having good color hue)
- RN 334905-91-8 HCAPLUS
- CN Pyrrolo[1,2-a]pyrimidine-8-carbonitrile, 6-[[4-(dimethylamino)-2-nitrophenyl]hydrazono]-2-(8-heptadecenyl)-4,6-dihydro-4-oxo-7-phenyl- (9CI) (CA INDEX NAME)



- IT **334905-91-8P**
(hydrazone cyan dyes having good color hue)
- IT **334905-93-0P**
(hydrazone cyan dyes having good color hue)

L18 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2002 ACS

1999:459407 Document No. 131:221102 A first high-field EPR study of photoinduced electron transfer in a base-paired porphyrin-dinitrobenzene supramolecular complex. Berg, Alexander; Shuali, Zohar; Asano-Someda, Motoko; Levanon, Haim; Fuhs, Michael; Moebius, Klaus; Wang, Ruizheng; Brown, Chris; Sessler, Jonathan L. (Department of Physical Chemistry, The Hebrew University of Jerusalem, Jerusalem, 91904, Israel). Journal of the American Chemical Society, 121(32), 7433-7434 (English) 1999. CODEN: JACSAT. ISSN: 0002-7863. Publisher: American Chemical Society.

AB It was demonstrated that high-field time-resolved EPR opens a new direction in straightforward elucidation of complex photochem. ET reactions, where different paramagnetic states and species are involved. This conclusion applies not only to base-paired donor-acceptor supramol. ensembles as described here but also to the large electron transfer proteins, such as photosynthesis reaction centers, and their covalently linked D-A model systems.

IT 219982-95-3
(high-field EPR study of photoinduced electron transfer in base-paired porphyrin-dinitrobenzene supramol. complex)

RN 219982-95-3 HCAPLUS

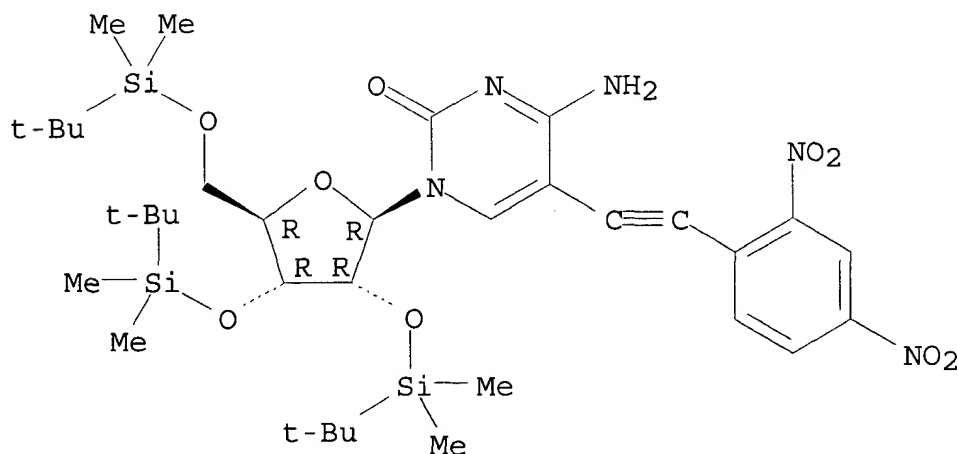
CN Cytidine, 2',3',5'-tris-O-[(1,1-dimethylethyl)dimethylsilyl]-5-[(2,4-dinitrophenyl)ethynyl]-, compd. with (SP-4-2)-[2',3',5'-tris-O-[(1,1-dimethylethyl)dimethylsilyl]-8-[4-(2,8,12,18-tetrabutyl-3,7,13,17-tetramethyl-15-phenyl-21H,23H-porphin-5-yl-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24)phenyl]guanosinato(2-)]zinc (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219982-94-2

CMF C35 H57 N5 O9 Si3

Absolute stereochemistry.



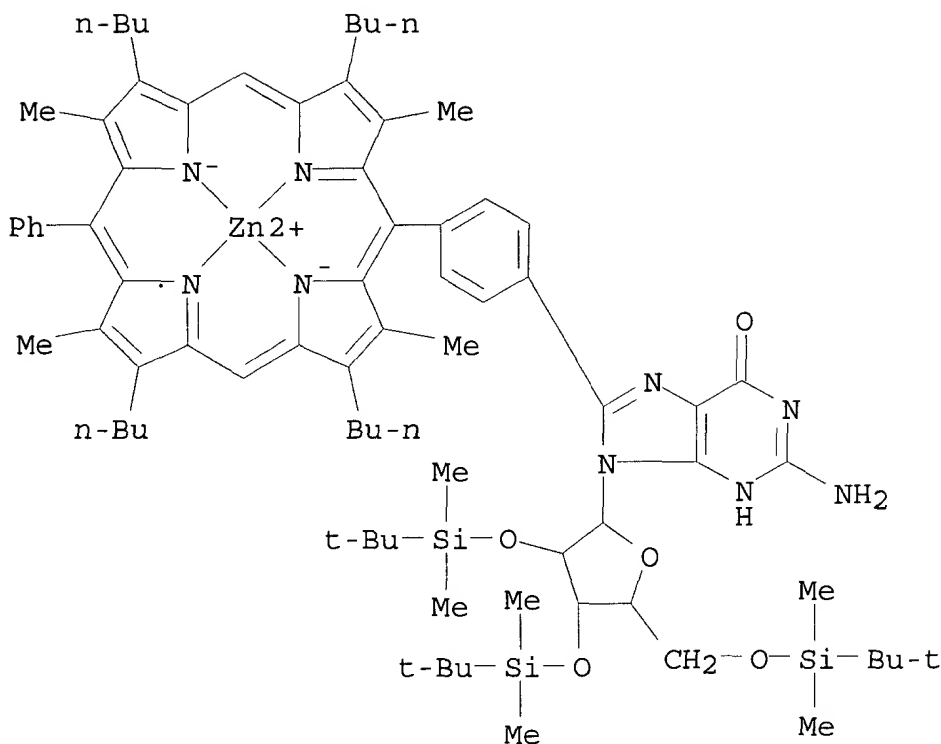
CM 2

CRN 151604-17-0

CMF C80 H113 N9 O5 Si3 Zn

CCI CCS

CDES 7:SP-4-2.(B-D-RIBO)



IT 219982-95-3

(high-field EPR study of photoinduced electron transfer in
base-paired porphyrin-dinitrobenzene supramol. complex)

L18 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2002 ACS

1998:801366 Document No. 130:146013 Intramolecular photoinduced
electron transfer in a hydrogen bonded zinc(II) porphyrin-
dinitrobenzene complex by time-resolved electron paramagnetic
resonance spectroscopy. Asano-Someda, Motoko; Levanon, Haim;
Sessler, Jonathan L.; Wang, Ruizheng (Dep. Physical Chemistry and
the Farkas Center Light-Induced processes, Hebrew University
Jerusalem, Jerusalem, 91904, Israel). Molecular Physics, 95(5),
935-942 (English) 1998. CODEN: MOPHAM. ISSN: 0026-8976.
Publisher: Taylor & Francis Ltd..

AB A time-resolved ESR (TREPR) study was performed on a hydrogen bonded
donor-acceptor complex, in which a guanine-functionalized zinc(II)

porphyrin and a cytosine-functionalized dinitrobenzene are assembled via base-pairing in two types of liq. crystal (LC). In the nematic phase, selective photoexcitation of the zinc(II) porphyrin moiety yields a narrow deriv.-like signal, which is not obsd. when the Watson-Crick complementary dinitrobenzene unit is absent. The rise of the narrow signal is accompanied by the decay of the broad one, which is ascribed to the lowest excited triplet state of the zinc(II) porphyrin. These findings are rationalized in terms of intraensemble electron transfer (ET) occurring from the lowest excited triplet state of the zinc(II) porphyrin donor to the dinitrobenzene acceptor, with the narrow EPR signal being attributed to a long distance charge-sepd. species. The phase pattern of the deriv.-like signal is reversed by substituting the LC with a pos. magnetic anisotropy (.DELTA..chi. > 0) for one with the opposite sign (.DELTA..chi. < 0). The obsd. narrow signal is assigned to a spin correlated radical pair (SCRp). In the isotropic phase at higher temps., a narrow, net absorptive EPR signal is obsd. regardless of the type of LC employed. This latter signal is assigned to a thermally populated SCRp.

IT 219982-95-3

(photoinduced intramol. electron transfer from lowest excited triplet state of porphyrin donor in hydrogen bonded zinc(II) porphyrin-dinitrobenzene complex in fluid liq. crystal environments)

RN 219982-95-3 HCAPLUS

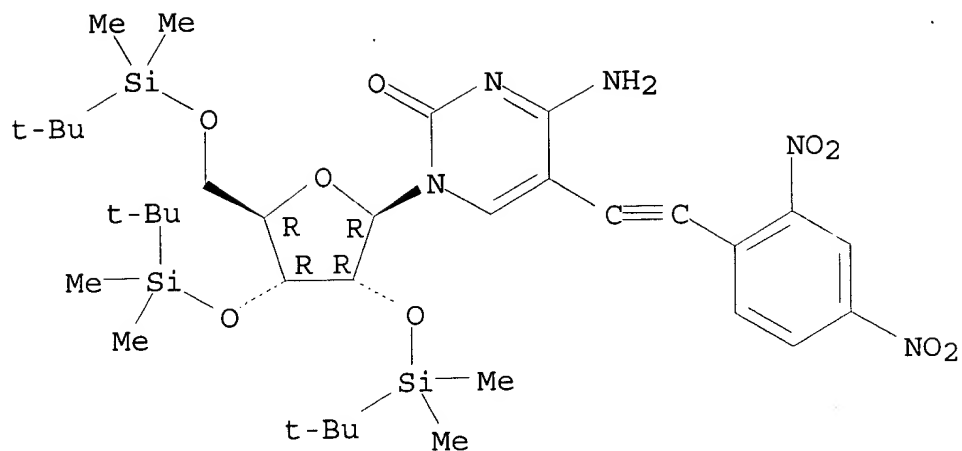
CN Cytidine, 2',3',5'-tris-O-[(1,1-dimethylethyl)dimethylsilyl]-5-[(2,4-dinitrophenyl)ethynyl]-, compd. with (SP-4-2)-[2',3',5'-tris-O-[(1,1-dimethylethyl)dimethylsilyl]-8-[4-(2,8,12,18-tetrabutyl-3,7,13,17-tetramethyl-15-phenyl-21H,23H-porphin-5-yl-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24)phenyl]guanosinato(2-)]zinc (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 219982-94-2

CMF C35 H57 N5 O9 Si3

Absolute stereochemistry.



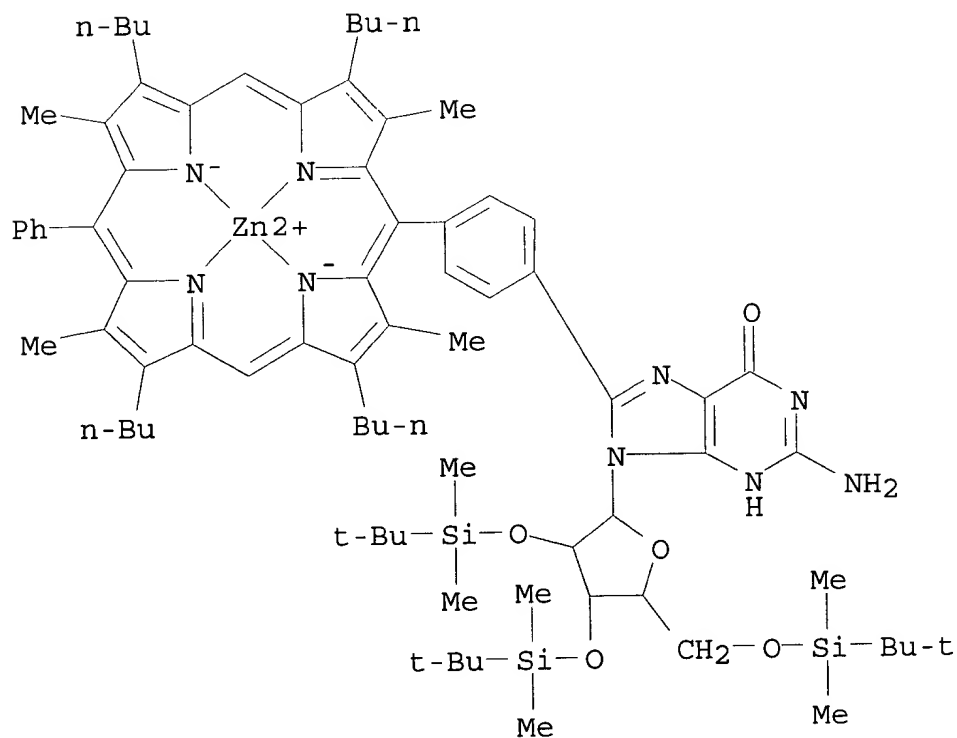
CM 2

CRN 151604-17-0

CMF C80 H113 N9 O5 Si3 Zn

CCI CCS

CDES 7:SP-4-2. (B-D-RIBO)



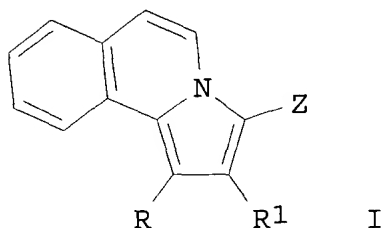
IT 219982-95-3

(photoinduced intramol. electron transfer from lowest excited triplet state of porphyrin donor in hydrogen bonded zinc(II) porphyrin-dinitrobenzene complex in fluid liq. crystal environments)

L18 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2002 ACS

1997:491577 Document No. 127:110293 Pyrrolo[2,1-a]isoquinoline dyes. Cuny, Gregory D. (Minnesota Mining and Mfg. Co., USA). Eur. Pat. Appl. EP 780443 A2 19970625, 19 pp. DESIGNATED STATES: R: DE, FR, GB, IT. (English). CODEN: EPXXDW. APPLICATION: EP 1996-119155 19961129. PRIORITY: US 1995-576502 19951221.

GI



AB The dyes have the structure I, where R is (un)substituted Ph, R1 is alkyl, aryl, aralkyl, or alkaryl, and Z contains N+, a carbonyl group, or CN at the end of a pathway of conjugated double bonds; the isoquinoline ring may also be substituted with OMe groups. The dyes have greater thermal and chem. stability than their indolizine analogs and have narrow absorption bands in the range 500-900 nm. Those that absorb in the near-IR region (700-1400 nm) lack significant absorption in the 300-400 nm UV region of the spectrum. Thus, papaverine was quaternized with PhCOCH2Br, cyclized, and condensed with 4-Me2NC6H4CHO to gave a dark purple dye with .lambda.max 640 nm.

IT 192388-62-8P

(prepn. of near-IR absorbing pyrroloisoquinoline dyes)

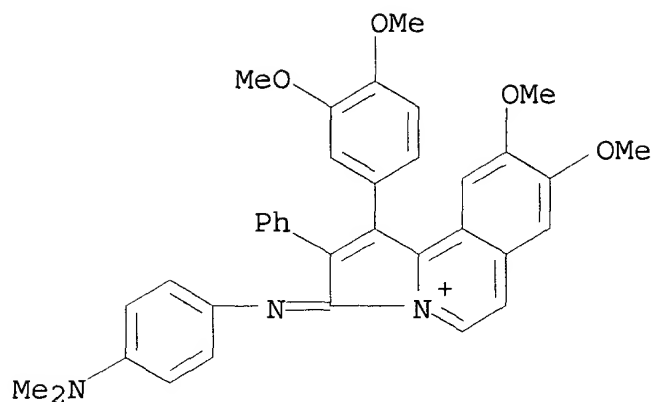
RN 192388-62-8 HCAPLUS

CN 3H-Pyrrolo[2,1-a]isoquinolinium, 1-(3,4-dimethoxyphenyl)-3-[[4-(dimethylamino)phenyl]imino]-8,9-dimethoxy-2-phenyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 192799-91-0

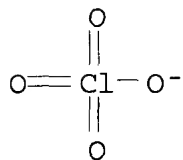
CMF C36 H34 N3 O4



CM 2

CRN 14797-73-0

CMF Cl O4



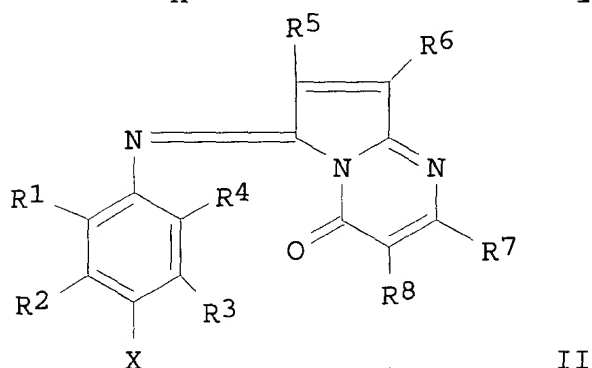
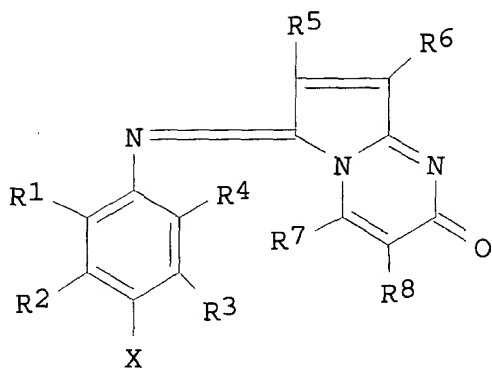
IT 192388-62-8P

(prepn. of near-IR absorbing pyrroloisoquinoline dyes)

L18 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2002 ACS

1994:566817 Document No. 121:166817 silver halide photographic material. Myaki, Yukio; Mikoshiba, Takashi; Shimada, Yasuhiro (Fuji Photo Film Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 05341430 A2 19931224 Heisei, 37 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-153399 19920612.

GI



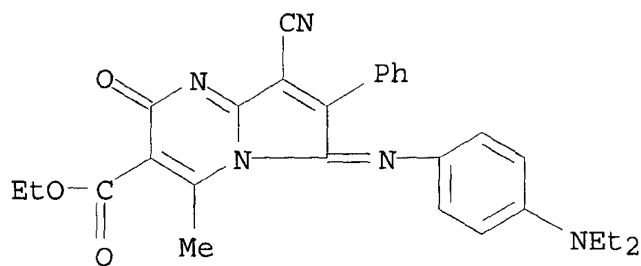
AB A black-and-white silver halide photog. material for use in x-ray films comprises silver halide photog. emulsion layers and an insol. azomethine dye represented by the formula I and II (R1-8 = H or a nonmetallic at. group; X = OH or NR9R10; R9, R10 = H, alkyl, aryl, or a heterocyclic ring group with the proviso that R1 and R2, R2 and R9, R9 and R10, R3 and R10, R3 and R4, R5 and R6, and/or R7 and R8 may combine to form a ring) or the like in a hydrophilic colloidal layer on the same or opposite side of the photog. emulsion layers.

IT 150147-78-7

(black-and-white silver halide photog. materials contg.)

RN 150147-78-7 HCAPLUS

CN Pyrrolo[1,2-a]pyrimidine-3-carboxylic acid, 8-cyano-6-[[4-(diethylamino)phenyl]imino]-2,6-dihydro-4-methyl-2-oxo-7-phenyl-, ethyl ester (9CI) (CA INDEX NAME)



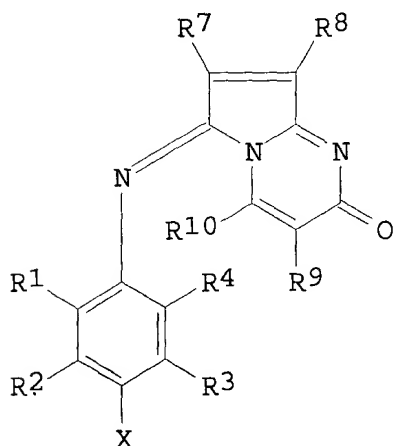
IT 150147-78-7 150147-81-2 150147-82-3
150147-86-7

(black-and-white silver halide photog. materials contg.)

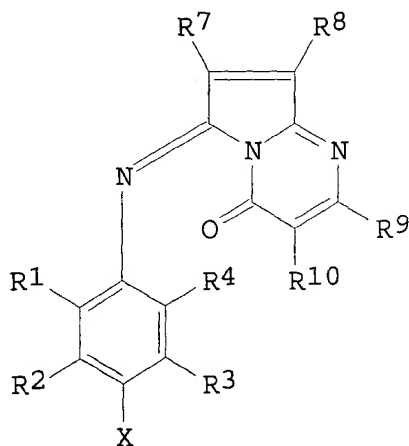
L18 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2002 ACS

1993:562373 Document No. 119:162373 Azomethine dyes with near infrared absorption and thermal-transfer elements incorporating them. Mikoshiba, Takashi; Yamakawa, Kazuyoshi (Fuji Photo Film Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 05070705 A2 19930323 Heisei, 39 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1991-258739 19910911.

GI



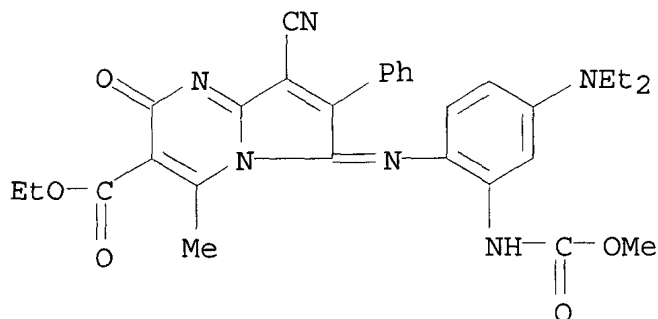
I



II

AB The dyes, producing thermal-transfer images with good lightfastness and sharpness, have the general formulas I and II (R1-R4, R7-R10 = H, group of nonmetallic atoms; X = OH, NR5R6; R5, R6 = H, alkyl, aryl, heterocyclic group; some of the R's may be combined to form a ring). I (X = NEtCH2CH2NHSO2Me; R1 = R10 = Me; R2 = R3 = R4 = H; R7 = Ph; R8 = CN; R9 = CO2Et), λ_{max} 697 nm, was prepd. starting from 2-amino-3-cyano-4-phenylpyrrole and di-Et (1-

IT ethoxyethylidene)malonate.
150147-79-8
(dye, for thermal-transfer printing)
RN 150147-79-8 HCAPLUS
CN Pyrrolo[1,2-a]pyrimidine-3-carboxylic acid, 8-cyano-6-[[4-(diethylamino)-2-[(methoxycarbonyl)amino]phenyl]imino]-2,6-dihydro-4-methyl-2-oxo-7-phenyl-, ethyl ester (9CI) (CA INDEX NAME)

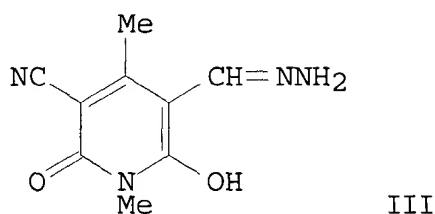
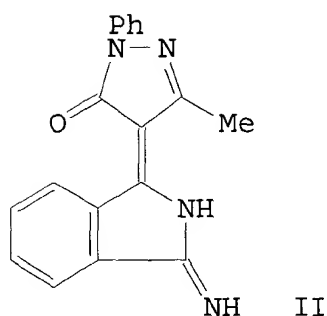
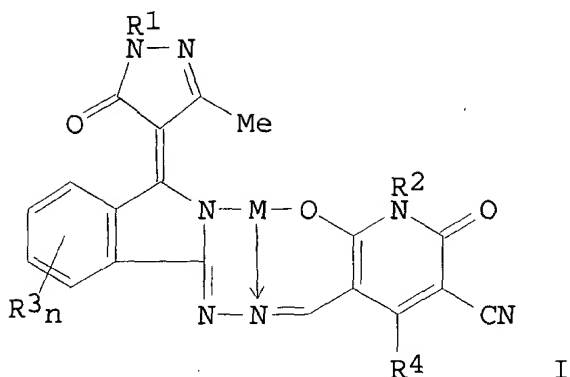


IT 150147-79-8 150147-83-4 150147-84-5
150147-85-6 150172-53-5 150244-54-5
150244-55-6

(dye, for thermal-transfer printing)
IT 150147-77-6P 150147-78-7P 150147-80-1P
150147-81-2P 150147-82-3P 150147-86-7P
(prepn. of, as dye for thermal-transfer printing)

L18 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2002 ACS
1992:43074 Document No. 116:43074 Metal complexes and pigmentation of
polymeric materials with them. Rolf, Meinhard (Bayer A.-G.,
Germany). Ger. Offen. DE 3937004 A1 19910508, 10 pp. (German).
CODEN: GWXXBX. APPLICATION: DE 1989-3937004 19891107.

GI



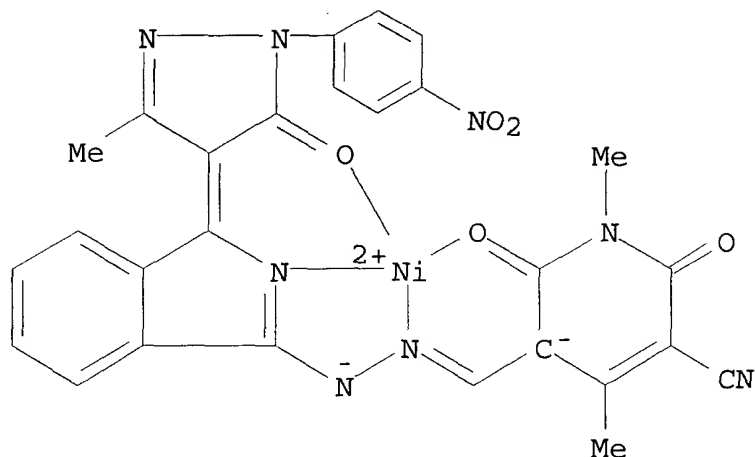
AB The complexes (I; M = Zn, Cu, Co, Ni; R1 = H, (un)substituted aryl or heteroaryl; R2 = H, (un)substituted alkyl, cycloalkyl, aryl, heteroaryl; R3 = substituent; R4 = H, Me; n = 0-4) are prepd. and used as pigments for macromol. compds. and automobile lacquers. Thus, 12 g II was heated 2 h at 90.degree. with 8 g III in 250 mL DMF and the product treated with 9.9 g Ni(OAc)2.4H2O to give red I (R1 = Ph, R2 = R4 = Me, M = Ni, n = 0) (IV). IV was used to pigment coatings and PVC.

IT **136946-14-0P**

(prepn. of, as pigment for coatings and plastics)

RN 136946-14-0 HCAPLUS

CN Nickel, [5-[[[1-[1,5-dihydro-3-methyl-1-(4-nitrophenyl)-5-oxo-4H-pyrazol-4-ylidene]-1H-isoidol-3-yl]hydrazono]methyl]-1,2,5,6-tetrahydro-1,4-dimethyl-2,6-dioxo-3-pyridinecarbonitrilato(2-)]-(9CI) (CA INDEX NAME)



IT 136946-14-0P

(prepn. of, as pigment for coatings and plastics)

L18 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2002 ACS

1991:218012 Document No. 114:218012 Electrophotographic photoconductors. Takai, Hideyuki (Canon K. K., Japan). Jpn. Kokai Tokkyo Koho JP 02053069 A2 19900222 Heisei, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-203846 19880818.

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Photosensitive layer of the photoconductors contain azo dyes $\text{Ar}(-\text{N}:\text{NCp})_n$ (Ar = arom. or heterocyclic ring group with or without connecting groups; and .gtoreq.1 of Cp are coupler residues with phenolic OH I; n = 1 - 4; A = arom. hydrocarbon ring or N-contg. heterocyclic ring). High sensitivity and stability are obtained. Thus, a photoconductor with Nylon-undercoated Al cylinder was coated with a charge-generating layer contg. isomeric mixt. of II and III and butyral resin, and with a charge-transporting layer contg. 4-dibenzylamino benzaldehyde diphenylhydrazone and PMMA, to obtain a photoconductor that was chargeable to -705 V and sensitivity (light dose required for half decay of charged voltage) 4.4 lx-s.

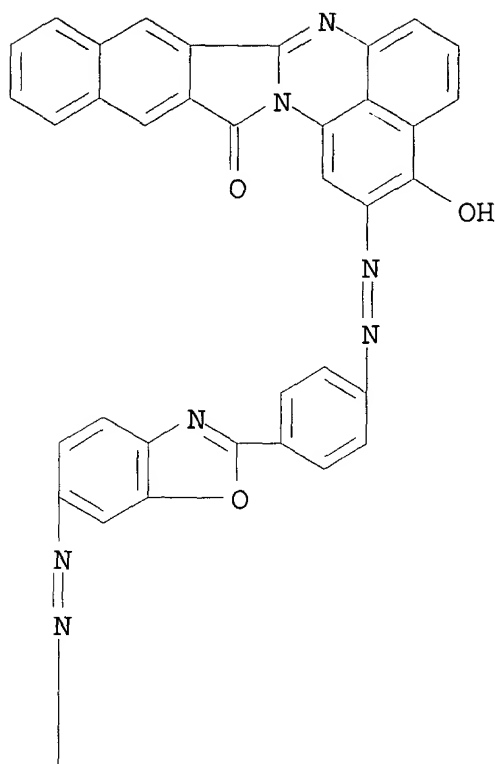
IT 128378-63-2

(as charge generator for electrophotog. photoconductors)

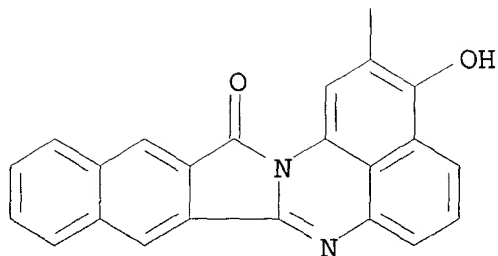
RN 128378-63-2 HCAPLUS

CN 14H-Benzo[m]phthaloperin-14-one, 3-hydroxy-2-[[4-[6-[(3-hydroxy-14-oxo-14H-benzo[m]phthaloperin-2-yl)azo]-2-benzoxazolyl]phenyl]azo]-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



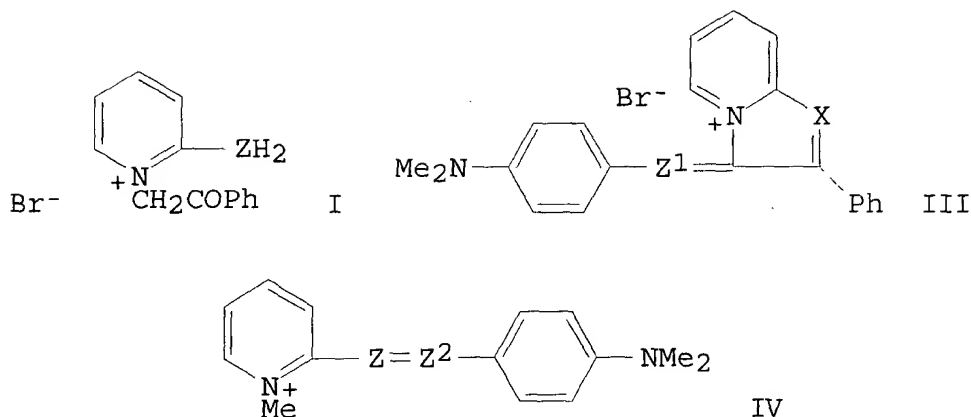
IT 128378-63-2 128378-64-3 128378-91-6
128378-92-7 128378-93-8 128378-94-9
128378-95-0 128378-96-1

(as charge generator for electrophotog. photoconductors)

L18 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2002 ACS
1976:561855 Document No. 85:161855 Condensation of 2-substituted
N-phenacylpyridinium bromide with p-dimethylaminobenzaldehyde and
p-nitrosodimethylaniline. Sharma, A.; Behera, G. B. (Post Grad.
Dep. Chem., Sambalpur Univ., Sambalpur, India). Indian J. Chem.,

Sect. B, 14B(7), 551-2 (English) 1976. CODEN: IJSBDB.

GI



AB Condensation of I(Z = N) [60713-67-9] with 4-Me₂NC₆H₄CHO (II) [100-10-7] or of I(Z = CH) [32896-98-3] with II or 4-Me₂NC₆H₄NO [138-89-6] gave dyes with .lambda.max. 640, 605, and 695 nm, resp., which are considerably higher than would be expected for products obtained by condensation at the 2-NH₂ or 2-Me group of I. This is attributed to formation of pyrrocolines (III, Z₁ = CH, N; X = CH) or their aza analogs (III, X = N), which was verified by comparison of .lambda.max. and anal. data with those for pyrrocolines prepd. independently. IV(Z = N, Z₂ = CH; iodide) [60713-66-8], prepd. by condensing 2-amino-1-methylpyridinium iodide [6964-53-0] with II, had .lambda.max. 440 nm as compared to 459 and 490 nm for IV (Z = Z₂ = CH) and IV (Z = CH, Z₂ = N), resp.

IT 60713-58-8P

(prepn. and absorption max. of)

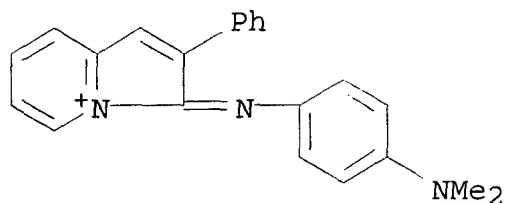
RN 60713-58-8 HCAPLUS

CN 3H-Indolizinium, 3-[[4-(dimethylamino)phenyl]imino]-2-phenyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 58285-72-6

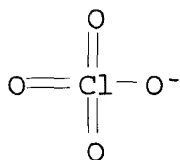
CMF C22 H20 N3



CM 2

CRN 14797-73-0

CMF Cl O4



IT 60713-58-8P

(prepn. and absorption max. of)

L18 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2002 ACS

1976:73472 Document No. 84:73472 Electrophilicity of positions 1 and 3 in pyrrocoline, an application of FEMO [free electron molecular orbital] theory. Sharma, A.; Behera, G. B. (P.G. Dep. Chem., Sambalpur Univ., Sambalpur, India). Indian J. Chem., 13(9), 977-8 (English) 1975. CODEN: IJOCAP.

GI For diagram(s), see printed CA Issue.

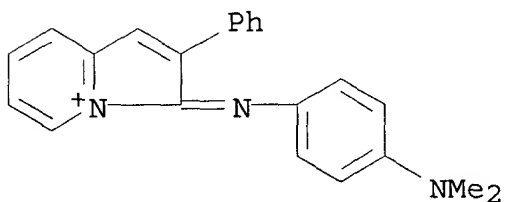
AB The greater electrophilicity of position-3 over position-1 of 2-phenylpyrrocoline was shown by FEMO calcns. on its derivs., the benzylidene dye I and its aza analog II.

IT 58285-72-6

(MO calcns. of, electrophilicity of phenylpyrrocoline and)

RN 58285-72-6 HCAPLUS

CN 3H-Indolizinium, 3-[[4-(dimethylamino)phenyl]imino]-2-phenyl- (9CI)
(CA INDEX NAME)



IT 58285-72-6

(MO calcns. of, electrophilicity of phenylpyrrocoline and)